Safety Maintenance and Production

EST. 1901 AMERICA'S PIONEER MAGAZINE IN ITS FIELD

FIFTY CENTS

MAY, 1935

All-Plastic Goggles

NOW...AO† INTRODUCES TWO LIGHTWEIGHT SPECTACLE GOGGLES WITH COMPLETE INTERCHANGE OF LENSES AND TEMPLES!

Illustrated are Nos. 786 and 787 — two of the latest and lightest AO All-Plastic Lens Goggles, with noncorrosive endpieces and metal skull temples. In the field of lightweight eyecare they show the same benefits of applied engineering as AO's goggles for heavier exposures.

Lenses, endpieces, and temples can be easily replaced or assembled. One-piece lenses of either clear or green acetate have high impact resistance. Replacement is simple — just slide off the endpieces and reassemble. No. 786 is ideal for use over regular spectacles for temporary or "on and off" wear. Model 787 is identical except that it has side shields for added protection against laterally flying particles.

Recommended Uses

(1) For light grinding, light machining, spot welding, woodworking, yard work where dust hazards exist, and for protecting AO Safety Glasses or regular glasses.

(2) For plant visitors and others who may be exposed to eye hazards for short periods.

Keep an adequate supply of these goggles (and extra lenses) on hand always for good fitting. Check with your nearest AO Safety Products Representative.

American Optical
SAFETY PRODUCTS DIVISION

†T.M. Reg. by American Optical Company

For hot weather, hot job comfort . . . keep production up with AO Sweatbands.

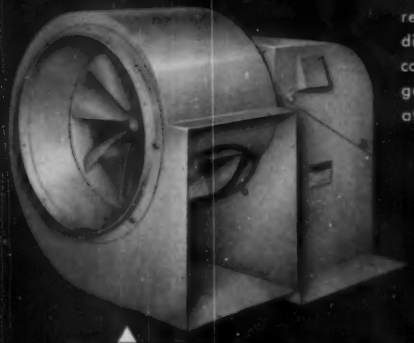
SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES
(For details, use Key # E-1 on card on page 77)

Fact:

Westinghouse Air Handling Provides Effective Control of Airborne Hazards

PC PRECIPITRON ▶

Cabinet-type electronic air cleaner—only 38" in direction of air flow—removes 90% of all dirt, dust, smoke, oil coolant mist—even germs—from atmospheric air.



▲ **VENTILATING SETS**

Compact, direct-connected, or belt driven for indoor or outdoor installation . . . for fume exhaust, ventilating toilets, stockrooms, locker rooms, and cafeteria kitchens. Readily available!

◀ **INDUSTRIAL FANS**

Rugged, efficient fans available on short delivery. Exhaust foul air, smoke, gases, fumes, metal dust, chips, shavings—even long, stringy materials. Three types of wheels.

Where health, safety and comfort require putting air to work properly, Westinghouse offers you a complete line of air moving and air cleaning equipment.

Compact and efficient, all Westinghouse units are designed to give long, trouble-free service. And you have the assurance that all parts are made by one manufacturer—one warranty—an exclusive Westinghouse-Sturtevant feature.

MORE FACTS . . . ? Call your nearest Westinghouse-Sturtevant Sales Engineer, he's the "Man with the Facts" . . . or fill in the handy coupon below.

WESTINGHOUSE AIR HANDLING

YOU CAN BE SURE . . . IF IT'S

Westinghouse

J-85443

Westinghouse Electric Corporation
Sturtevant Division, Dept. 18D
Hyde Park, Boston 36, Mass.
Please send more facts on Westinghouse Air Handling Equipment.

NAME AND TITLE .....

COMPANY .....

CITY ..... STATE .....

(For details, use Key # E-2 on card on page 77)

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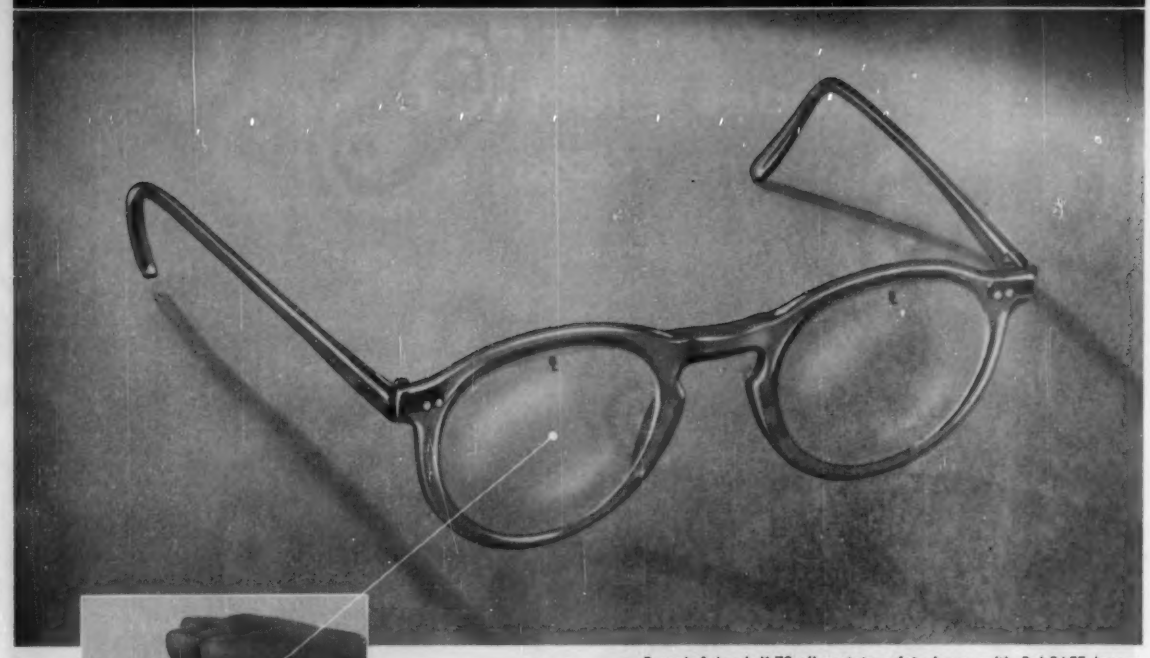
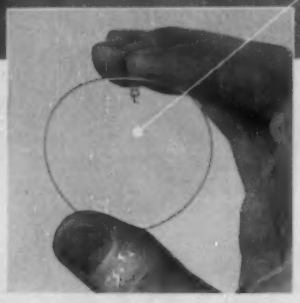
SAFETY LENS QUALITY IS NEVER A LUXURY



Bausch & Lomb Y-70 all-acetate safety frame with Bal-SAFE lenses.



So workers see better! Bal-SAFE industrial lenses are finished to the same critical standards as regular corrective lenses.

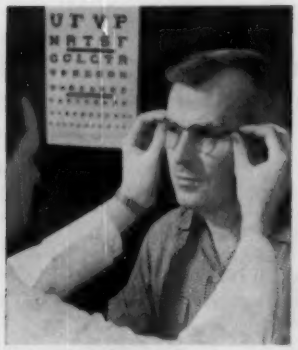
Bausch & Lomb glass technology insures an **EXTRA** margin of safety in Bal-**SAFE** lenses

For eye protection the lens is the thing. It may stand between a worker's precious vision—and tragic, eternal blackout.

You provide the finest protection science offers—when you specify Bausch & Lomb protective eyewear with Bal-SAFE impact-resistant lenses.

Only the finest glass is used—made in the nation's only plant devoted exclusively to production of optical glass—Bal-SAFE lenses are free from imperfections that can lead to disturbed vision, headaches and nausea. Bausch & Lomb heat treating methods insure the precise control necessary for a superior degree of impact resistance.

Acquaint yourself with Bausch & Lomb safety eyewear and with the extra quality of Bal-SAFE lenses. There's a representative in your area.



Where visual correction is needed, Bausch & Lomb recommends the complete services of eye care specialists.

BAUSCH & LOMB

SINCE 1853

Just mail this coupon with your business letterhead to get your free copy of "Complete Eye Protection."

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90541 Smith St., Rochester 2, N. Y.

(For details, use Key # E-3 on card on page 77)

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Safety Maintenance and Production

FORMERLY "SAFETY ENGINEERING"
EST. 1901

VOL. 109, NO. 5 **MAY, 1955**

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By courtesy of Association of American Railroads

AMERICA'S PIONEER MAGAZINE IN ITS FIELD

SAFETY MAINTENANCE & PRODUCTION is indexed regularly by Engineering Index, Inc., New York

It's Safe to Say

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★ WHY FEDERAL CONTROL?

THERE has been introduced into the United States Senate by Senator H. Alexander Smith of New Jersey a bill designed to strengthen Federal control over safety. The Smith Industrial Safety Act, S. 1091 has the blessing of seven other senators whose political persuasion is immaterial but who apparently feel that private industry and the respective states are not capable of furthering the cause of accident prevention without intervention by the Federal government.

The passage of Act S. 1091 into law would give rise to extending Federal bureaucracy to a field best served by private enterprise and the states themselves. Moreover, the bill is diametrically opposed to President Eisenhower's own expressed hope of returning as many Federal activities as practicable back to the states themselves.

Any such law would result in the Federal government pouring millions of dollars down the drain on its so-called safety programs better left to the states. Moreover, it would create a large force of inspectors and bog down industrial safety in a morass of red tape.

If private industry, the insurance fraternity and the respective states had not demonstrated long ago that they were prefectly capable of dealing with the problem of industrial accidents, there would be some slight excuse for Federal control of safety. It cannot be argued that any threat so intimately tied to our welfare as accidents should receive concerted action by duly constituted authorities. But transforming the safety movement into a solid gold political football, wrapped in Federal red tape, ignores the possibilities for colossal waste, and likewise ignores the tremendous gains in safety made in the past 25 years.

Under the terms of the Smith bill, the Secretary of Labor would be empowered to investigate the operation of state safety programs. As written, the Act is so broad that the Federal government would pay from one-half to three-fourths of the cost of state safety programs but in no case would payment to any state be less than $15,000 per year. Those programs would have to meet standards to be established by the Secretary of Labor under penalty of having the payment withheld pending compliance and the cost to Federal taxpayers conceivably could run into millions every year.

Presumably, the requirements would be the same for Nevada as for Pennsylvania; apply equally to Oregon and Florida without any consideration for purely local conditions, hazard exposures or type of industry. What then would happen to the especially tailor-made safety programs found so effective in the steel mills of Pittsburgh or Birmingham, western copper mines, electric companies in New York State or shipbuilding plants in Virginia? Can any single Delphic Oracle on the Federal payroll decide what is best to stop all forms of accidents and imply that private industrial and insurance company inspectors have not done a safety job?

The Smith bill would have the Labor Secretary hire specialists as consultants and create a new agency to have Federal inspectors assigned to tell industry how to operate with safety for employees.

No one would claim that all our industrial safety laws are perfect or that Utopia in safety has been reached. But to imagine that there is any short cut to the millennium through removing self-reliance and individual responsibility and substituting Federal control of bureaucracy is the ultimate in delusion.

We have no wish to point the scornful finger at well-meaning senators whose motives are beyond all question. But what of the 36,000 highway deaths, 38,000 home and farm accident fatalities. Must we broaden still further the Smith Act to provide for Federal highway police and assign a Federal safety man to all homes and farms?

Everytime a new hazard is introduced into an industrial operation, private management, insurance companies, safety equipment manufacturers, regional safety councils as well as State safety officials literally sit up nights to devise new measures of control. Have all those combined efforts been in vain? We think not! H. A.

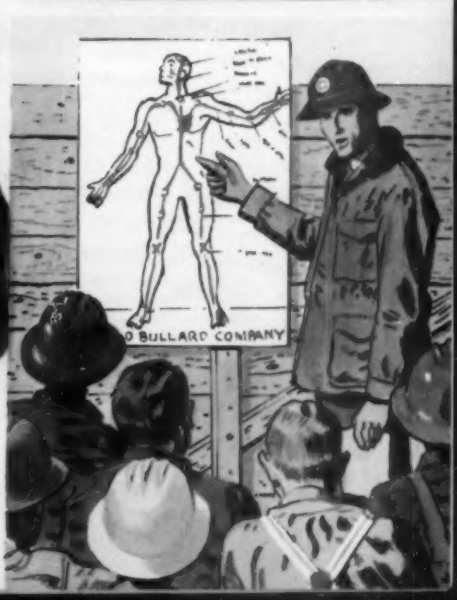
our partner in business . . .

THE SAFETY ENGINEER

Out in the field in sub-zero weather, high on the sun blistered girders of a half-finished bridge, everywhere safety engineers are testing, checking, teaching . . . preventing life-stealing accidents before they happen. These men, whose experience on the industrial firing line is carefully evaluated and recorded by our field representatives, help Bullard engineers and technicians plan and devise safer ways for industry. Our hard hats are off to safety engineers—the lifeguards of industry—our partners in the business of saving lives. E. D. Bullard Co., 275 Eighth St., San Francisco.

Write for full color prints of this painting, suitable for framing, without advertising message.

BULLARD



Q:
What about building felt hat comfort into hats and caps that meet all standard industrial tests?

A:

We'll go you one further. This year's Bullard glass fiber hat and cap surpass industrial tests and are more comfortable to wear than that old felt hat. Exceedingly light in weight, they are cooler inside in the hot sun, because fiber glass deflects the sun and acts as an insulator. And for cool weather comfort there is a wide selection of winter liners. Hats and caps available in choice of molded-in colors. Also in colorful fiber glass we have electrical hats and caps and firemen's hats.

Q: Can we get color in aluminum hats to identify the trades of men on our crews?

A:

Yes, at no extra cost, in bright non-fading yellow-gold, blue, grey, green, bronze and standard silver. Bullard aluminum hats and caps meet the same rugged torture tests as our glass fiber hats. The "Shorty" model is one of the lightest (only 10 ozs.), and most comfortable safety caps made. Notice the flared brim that protects the head, neck and ears.

For your questions – ANSWERS THAT SAVE LIVES!

This is what we mean when we call safety directors "our partners in business". Questions like these are referred to our research and development department. Here many of them are incorporated into Bullard products, so they will better protect your men in the field. Write for our new catalog with specifications and technical data on Bullard safety equipment.

EVERYTHING BULLARD IN SAFETY — HARD BOILED — see our catalog in PLANT ENGINEERING FILE or write for copy

BULLARD

E. D. BULLARD COMPANY • 275 Eighth St., San Francisco, California

Q:
There hasn't been a change in the design of miner's caps in years . . . what can you do about it?

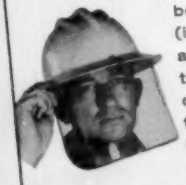
A:

First we made our miner's cap from tough resilient glass fiber. We made it so tough that after the consistent dropping of an eight pound ball from five feet, there was no damaging effect. We put a rolled edge all the way around the cap to keep the wearer's ears and neck from being nicked and also to hold side wire lamp cords. Across the top we put a deep groove that offers added girder-like strength, as well as securing an overhead lamp cord.

Safety hat accessories most wanted by safety engineers!

Universal size headband that can be adjusted in seconds. Entire hammock and band easily snap out for replacement.

Chin straps of heavy elastic or web are available to fit all styles of Bullard safety hats and caps. They can be quickly installed.



Face shields in both clip-on (illustration) and swing-back types are specially made to fit all safety hats and safety caps.

Bullard has designed six types of winter liners to provide comfort and warmth to wearers of hard hats.

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For further details about products described on opposite page, use Key # E-4 on card on page 77.

START CUTTING YOUR ACCIDENT RATE —HERE—

. . . with safety-imprinted AJAX Cups.

These crisp, clean, easy-to-drink from cups will put tested safety messages right in your worker's hands several times a day—when he's relaxed, receptive, ready to read. And the National Safety Council confirms that safety messages *that get read* are one of the most effective ways to help reduce accidents.

AJAX Cups lessen the risk of transmitted infections, too; reduce absenteeism, promote good employee relations. Any bubbler fountain is easily converted to provide this safer, cleaner, more generally preferred method of drinking water. Ask your paper merchant about it.

AJAX® Cups — one-piece, wedge-shaped, easy to hold and drink from; in 4, 6 and 7 oz. sizes; packed imprinted with assorted stock safety messages at no extra cost or your own message to order.

AERO® Cups — for those who prefer a flat-bottom cup; in 3, 4, 5 and 6 oz. sizes. Also with stock safety messages or your own message to order.

Get the full story

Write us today for this new folder which gives full details on imprinted AJAX and AERO Cups and equipment.

United States Envelope Company

General Offices: • Springfield 2, Mass.

15 DIVISIONS FROM COAST TO COAST

(For details, use Key # E-5 on card on page 77)

C-15

So far so good...

but will she make it?

High heels and leather soles offer scant protection against skidding on your high-gloss floors. That's why you need LEGGE *Safety* Floor Polishes.

LEGGE Polishes bring out the *true* lustre of your flooring *without* slipperiness. Their co-efficient of friction goes up to *75%* beyond U. L. requirements. And the Safety *lasts*. Slip-meter readings taken 4 months after application show no appreciable loss in slip-resistance. Hospitals, industrial plants and office buildings throughout the country report reductions of *98%* and *more* in slip-accidents.

How much does it cost?

Stacks of case histories testify that LEGGE Maintenance saves up to *33⅓%* on labor and materials. Each polishing lasts far longer. And the costly process of stripping your floors is rarely necessary. For Safety, appearance *and* economy, clip this coupon today.

Walter G. Legge Company, Inc.
Dept. F-5, 101 Park Ave., New York 17
Branch offices in principal cities.

☐ Have a LEGGE Safety Engineer call to discuss my floors. No obligation.
☐ Send a Free copy of your booklet, "Mr. Higby and the Gremlin".

Name_____
Firm_____
Street_____
City_____ Zone____ State____

(Use Key # E-6 on Inquiry Card on page 77)

THE Future SHOWS

Chicago, Ill. *May 2–4*

Thirty-second Annual Midwest Safety Conference and Exposition (Sherman Hotel). Joseph Stech, Manager, Greater Chicago Safety Council, 10 N. Clark St., Chicago 2, Ill.

Easton, Allentown, Bethlehem, Pa. *May 2–4*

Twenty-eighth Annual Eastern Pennsylvania Safety Conference (May 2, Hotel Easton; May 3, Hotel Americus and Hotel Traylor; May 4, Lehigh University). H. A. Seward, secretary, Lehigh Valley Safety Council, 602 E. 3rd St., Bethlehem, Pa.

Syracuse, N. Y. *May 16–18*

Central New York Safety Conference & Exposition (Hotel Syracuse & Hotel Onondaga). Walter L. Fox, Manager, Safety Division, Syracuse Chamber of Commerce, 351 S. Warren St., Syracuse 2, N. Y.

Chicago, Ill. *May 16–20*

Eighth National Materials Handling Exposition & Conference (International Amphitheatre). Clapp & Poliak, Inc., exposition management, 341 Madison Ave., New York 17, N. Y.

Winston-Salem, N. C. *May 18–20*

Twenty-fifth Annual North Carolina Statewide Industrial Safety Conference (Robert E. Lee Hotel). H. S. Baucom, Safety Director, North Carolina Industrial Commission, Raleigh, N. C.

Duluth, Minn. *May 19–20*

Thirty-first Annual Conference, Lake Superior Mines Safety Council (Hotel Duluth). John Anderson, secretary, 18 Federal Building, Duluth 2, Minn.

Richmond, Va. *June 2–4*

Twenty-first Annual Meeting Virginia Safety Association (Jefferson Hotel). William M. Myers, executive secretary, Virginia Safety Association, Room 302, 1103 E. Main St., Richmond 19, Va.

Hartford, Conn. *June 7–8*

Tenth Annual Connecticut Safety Society Conference (Statler Hotel). William G. Willse, Manager, National of Hartford Group, 1000 Asylum Ave., Hartford 15, Conn.

Hartford, Conn. *June 7–8*

Second Annual Meeting of The New England Accident Prevention Association (Statler Hotel). Everett W. Martin, President Pro Tempore, 65 Whitney Ave., New Haven, Conn.

Los Angeles, Calif. *July 12–14*

Second Western Plant Maintenance & Engineering Show (Pan Pacific Auditorium). Clapp & Poliak, Inc., exposition management, 759 Monadnock Bldg., San Francisco 5, Calif.

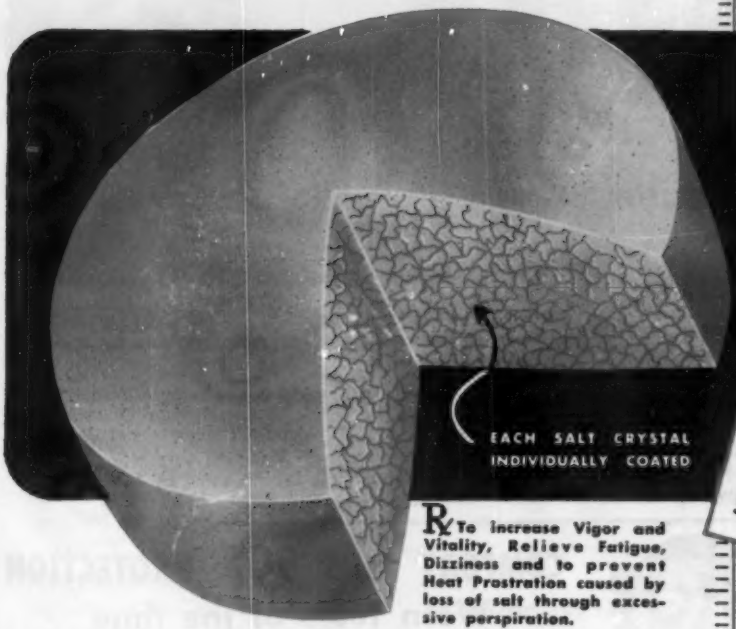
Cleveland, Ohio *Sept. 13–15*

Seventeenth Annual Ohio State Safety Conference and Exhibit (Hotel Carter). Michael L. Stefani, General Manager, Cleveland Safety Council, 2073 E. 9th St., Cleveland 15, Ohio.

York Harbor, Me. *September 15–16*

Twenty-eighth Annual Maine State Safety Conference (Marshall House). Arthur F. Minchin, Secretary, Department of Labor & Industry, State House, Augusta, Me.

Combat HEAT FATIGUE with



PEP-UP®
IMPREGNATED salt tablets

Will not cause Nausea or Stomach Distress

℞ To increase Vigor and Vitality, Relieve Fatigue, Dizziness and to prevent Heat Prostration caused by loss of salt through excessive perspiration.

Releases Salt Immediately!
(Not Enteric Coated)

- Controlled (slow) dissolving eliminates nausea.
- Starts dissolving immediately.
- Dissolves completely in about 100 minutes.
- No delay in getting salt into system.
- Withstands high temperatures and rough handling.
- Can be stored for long periods without deteriorating.
- Will not absorb moisture from air and clog dispensers.
- The Formula used for producing Impregnated Salt tablets was developed at the United States Naval Medical Research Institute. The tablets meet government specifications for Type III, Class C Impregnated Salt tablets (specifications set forth in Federal Standard Stock Catalog No. 55-S-31e, Section IV (Part 5), dated April 29, 1954, and Amendment No. 1 (June 15, 1954).

Expendable Dispenser

PEP-UP Impregnated Salt Tablets come to you in sanitary, factory-sealed Dispensers at no extra cost. THROW AWAY DISPENSER WHEN EMPTY. HANG UP A NEW ONE. Save the expense of purchasing, servicing and replacing individual dispensers.

Working for You to Make Safety Work

UNITED STATES SAFETY SERVICE CO.
KANSAS CITY 6, MISSOURI

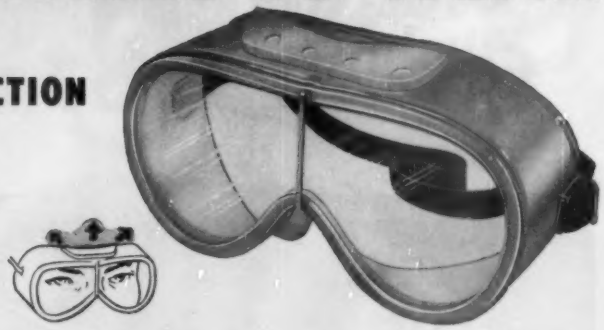
BRANCHES IN PRINCIPAL INDUSTRIAL CITIES

IN CANADA: PARMELEE, LTD., TORONTO & MONTREAL
(For details, use Key # E-7 on card on page 77)

WATCHEMOKET eye SAVERS

COMFORTABLE TO WEAR

COMFORT PLUS 100% PROTECTION



SOFT VINYL FRAME Goggles

COMFORTABLE • LIGHTWEIGHT • FORM-FITTING

- **Comfortable** . . . extra wide lens . . . large vinyl frame fits over all prescription frames.
- **Stac-Vent** . . . better ventilation reduces fogging and provides utmost safety.
- **Eye Savers Lenses** . . . methacrylate lenses are safer . . . shatterproof and never pit.

MODEL 440SV — clear frame **460SV** — green frame
Heavy Impact Goggles with replaceable optically perfect, methacrylate lenses. Clear Lens (C) .125" thick.
Green Lens: Light (G2) Medium (G3) .080" thick.

MODEL 441SV — clear frame **461SV** — green frame
Average Impact Goggles with replaceable optically perfect, acetate lenses.
Clear Lens (AC) .060" thick. Green Lens (AG) .050" thick.

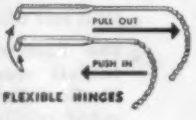
MODELS 490 or 491 — opaque black frames
Furnished with Stac-Vent only
Methacrylate Lenses: same as 440
Acetate Lenses: same as 441

COMFORT PLUS 90% PROTECTION

Worn 100% of the time

TUC-AWAY Spectacles

- **Optically Perfect Lenses** . . . .080" thick never shatter or pit . . . resist heavy impact. Available clear, green and gold.
- **Side Shields** . . . in 4 styles . . . an integral part of the lens . . . side and bottom protection with clear vision.
- **Economical** . . . initial cost is low . . . maintenance is eliminated, lenses are replaced by each wearer.
- **RETRAX** . . . One size fits every worker thanks to Adjustable Retrax Temples and Universal Nose Piece.



MODEL 415 plastic retrax temples (illus.)
MODEL 412 metal retrax temples
MODEL 410 plastic club temples

For details see your Authorized Eye Savers Suppliers or write direct

Quality Eye Protective Equipment ***Made by the Leaders in Plastics***

WATCHEMOKET OPTICAL CO., INC.

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ASA Code for Graphic Arts Industry

New American Standard Safety code for graphic arts includes standardized colors and order for vertically-mounted press controls.

PROTECTING PERSONNEL and increasing efficiency in operating printing presses are the object of the first national safety code especially designed for graphic arts equipment.

The new American Standard Safety Code for Controls and Signaling Devices for Graphic Arts Presses has just been released. The American Standards Association recommends the voluntary adoption of the code by printing companies at their earliest convenience — whenever they purchase new equipment or make any major change or alteration in existing equipment.

"If this code is used throughout the printing industry as each plant renews its equipment, confusion in the use of these controls will be prevented, thereby eliminating a source of serious injuries and increasing efficiency in operation. It will provide uniformity throughout the industry so that on change of employment, workers will be familiar with control operations in their new jobs," according to Admiral Hussey, managing director of the ASA.

He adds: "The committee, composed of representatives from throughout the graphic arts field, who developed this standard, realized the psychological implications of safe equipment in forming these requirements—a man who appreciates a good machine, properly-equipped to guard him from every personal injury will be free to apply his wholehearted energy to the operation of such a machine."

Commercial Publication Presses

The code is for both publication presses such as are used for newspapers, magazines, rotogravure, large catalog work, etc.; and for commercial presses, either sheet-fed or web-fed. Push-button stations for the presses are required by the code to be arranged in a single row and vertical, except in a commercial press where sometimes this arrangement is impractical for convenient mounting, then the arrangement may be horizontal.

Control stations for publication presses will be provided with push-buttons with the following designations and colors:

GREEN: A maintained-contact button marked **SAFE.** When depressed, it prevents the press from being started, or when the press is moving, prevents further increase in speed.

BLACK: A maintained-contact push button marked **READY.** Depressed, it establishes permissive circuits for starting the press.

YELLOW: A momentary-contact button marked **FASTER.** Starts the press and increases the speed as long as the button is held depressed.

BLACK: A momentary-contact button marked **SLOWER.** Decreases the speed, eventually arriving at threading speed.

LIGHT GREY OR ALUMINUM: A momentary - contact button marked **INCH.** Allows movement at threading speed.

RED: A momentary-contact button marked **STOP.** The stop button ***only*** shall be a long push button.

Control stations for commercial presses have a stop button and may have buttons for **INCH**, **RUN** (black), **SLOW-FAST** (black), and **REVERSE** (yellow). Certain designations formerly used on push buttons which looked similar to other words were eliminated by the committee who developed the standard. In each case, the push button was marked with the term which best described its function.

The standard outlines requirements for safelights and warning signals. It specifies that control circuit arrangements be made to assure signals being operated prior to any movement of the press. An appendix is included with the standard to

(Continued on page 24)

How an Eye Program

by LUTHER WEIBEL

Employee in the picture at right is having his vision rated for its effectiveness in his job. Production and his earning capacity will benefit.

THE WORK FORCE OF our hosiery plant would be termed a mature work force in that 62 percent of our employees are women averaging 33 years of age. Our average male is 41 years of age. One out of two employees has been with the company 15 or more years. It is easy to see that we have a reliable, fairly efficient group of employees who have spent most of their time producing hosiery.

The employees are economically independent and have no hesitancy at showing their independence if work conditions are displeasing to them. In fact, 80 percent of the employees are married; and, of this group, 88 percent own their homes mortgage free. We know that the work force is emotionally mature and happy in their work and home life.

The problems of industrial vision are not new. Over a period of many years many industries have toyed with the idea that an employee's vision is necessary to good job operation. Certain industries in the past have required that all employees wear glasses; some to improve the employee's vision while others required glasses to protect the employee's eyesight from accidents. Some industries have insisted on glasses while other industries refused to employ anyone who had glasses—considering them sub-standard employees visually.

Today the eye specialist is a professional interested in doing a good job rather than in selling glasses. Competent eye specialists, both the optometrist and ophthalmologist, prescribe glasses only when it is necessary to the job and to the employee's safety.

One of industry's greatest problems is to see that the eye specialist is given enough information regarding the employee's job so that he, the eye specialist, can better prescribe glasses for the employee's job comfort and eye safety wear.

Determining Visual Skills

In order to determine visual skills necessary for a specific job, a scientific instrument is required so that the testee may be screened in a short time and so that the results may be reliable. We use one of several types of instruments developed to fill this need. All of these instruments do their job swiftly and give fairly accurate results on certain specific visual skills.

Industry is not professionally qualified to determine whether or not glasses are needed in order to operate a specific job competently. Therefore, the vision instrument must, of necessity, be non-diagnostic in nature. When we test an employee we advise him that the instrument does not tell us whether or not glasses are needed. We do explain to the employee that the instrument aids the company in screening those employees who do not measure up to the visual standard set for a specific department.

I, personally, am of the opinion that industry cannot force any type of testing program on its employees This applies to the use of the instrument both as a technique for determining employees "eyefully" able to do a job and for those employees who need safety glasses. A forthright program must be effected

Came to our Chemical Plant . . .

which will sell this program to the employees. In the two plants in which I have had experience with a vision testing program, we have never had less than 95 percent participation in this program and this has been wholly on a voluntary basis. Good human relations require that any information regarding an employee's personal life whether it is poor physical conditions or poor vision, must be kept confidential in order for industry to retain the employee's confidence.

Must Fit Industry

Installing a vision program must be conditioned to the organization itself. A procedure that may work in one industry, or department, may be a total failure in others. In some plants you can be successful by posting a notice on the bulletin boards, while in other plants, the posting of such a bulletin may result in filing of a grievance by the union on the basis that any change in working conditions is a bargainable issue (this is defined under the Taft-Hartley Law.).

Before installing any vision or safety program in the plant, it is necessary for top management to recognize the need for it and to go all out in its support. Many industrial relations divisions have had so-called pet projects which failed because top management did not wholeheartedly support the project. Selling any program must, of necessity, come from the top.

We brought our Industrial Vision Program into the plant about the time industrial relations division was established. We were aware that our employees had had no psychological testing, vision testing, etc. prior to this time. We were afraid that establishing this program would become an issue with the unions that were battling for bargaining rights. The election was just around the corner. Considering all of these factors we approached the problem of explaining the program to the employees with much consideration and a definite selling plan.

We had a number of group meetings with our supervisors, and then tested these supervisors individually before screening any of the rank and file employees. No human relations program of any kind should be installed without the line supervisors being made aware of the complete program. Experience has shown that talking over our problems with our supervisors obtains quicker and more lasting results. Releasing a paper from the inner sanctum of management is a cold way of trying to sell a living human relations program.

In talking over our problems man to man with our supervisors, we obtained ideas from them on how to better install the program. It let our supervision feel that they were assisting in the formulation of policy and that they are in truth a member of the management team. The support of these supervisors has paid off as they are the biggest boosters we have in our plant for our visual program.

Immediately following the meeting with our supervisors and also before testing the employees, we had a meeting with union representatives. We explained to the union, exactly as we had explained to the supervisors, that we anticipated that employees who were poor in pro-

duction and quality had visual problems and that we would like to prove or disprove our premise. As we were on piece work or incentive earnings we explained that we thought it possible that if employees were "eyefully" able to do the job, their earnings would be increased; while at the same time their bad work would be decreased.

Unions Consulted

Unions dislike any program in which the employees take a loss of earnings and, therefore, we pay for the employee's time at the testing instrument. We emphasize that no employee's job will be affected by the results of the eye examination. We do state, and very firmly, that we expect to refer those employees with sub-standard vision to an eye specialist, at our expense. We explain to the employees, and to the union representatives, that one of our prime reasons for using the testing instrument is to improve our method of placement of new employees. Naturally, we emphasize that the rehabilitation of our skilled employees is very necessary.

The unions have cooperated very well in this program. I cannot see why any union would oppose a vision program or a good safety program providing the same care is used in explaining it as was used when we started our vision testing program. Many industries are apprehensive about dealing with unions on modern management psychological testing techniques. In actual practice many of the old line unions have built elaborate training centers and are using psychological testing and modern training procedures to assist them in doing their training job. Certain unions have established rehabilitation centers so that employees who have become unable to do a specific job may be rehabilitated and trained so they can do another type of job. If management takes the time to make unions aware of the need for proper safety measures and for good vision on the job the union can do a great deal to sell the program to its members.

Despite the fact that we had explained our program to the supervisors and to the union, we thought it necessary to discuss the program with the employees themselves. We called departmental meetings, brought our vision testing instrument directly into the work group, and explained to them exactly what we had explained to the supervisors and the union. We emphasized time and time again that no employee's job hinged on the results of the test. And that no employee need fear losing his job because of failure to pass the test. We tried to build up the program so that the employees knew that if they were improved visually and were better able to do the job they would have increased earnings. Their security is also greater as their work record shows less bad work.

We had only one departmental meeting because it was so successful. The employee demand for the instrument was so great that we brought it into the other departments directly.

"Eye-Conscious" Employees

From the very first day that the vision instrument came into our plant the employees became exceedingly "eye conscious." Employees who had never seen an eye specialist began to go to the eye doctor and it was very obvious to us that many employees were wearing glasses who had no glasses before the program. Many of these employees saw the "eye doctor" prior to being tested.

The local newspaper and even newspapers in the larger metropolitan centers heard about our vision program and featured a number of articles about it. We were fortunate in attracting the attention of a very popular columnist. He visited our plant, saw the instrument, was tested on it, talked to our employees about it, then wrote a very homey story about our plant. It was very good public relations. The news releases attracted the attention of the community and members of the employees' families visited the personnel department to be tested. We had grandparents, children, and a variety of kinfolk visit the plant and we tested them. However, we explained to them that we could not tell them whether or not they needed glasses but that they would have to visit an eye specialist to obtain professional advice. We do know that this approach was a great stimulus to our public relations and has been a very important factor in creating community good will.

We take the instrument directly into the department in order to test employees. In those departments which have a high noise level we take the instrument as near to the department as possible so that the employees do not lose too much

GOOD WORK AND GOOD VISION
THOSE MEETING VISUAL REQUIREMENTS
BAD WORK
63% OF THOSE WHO MEET THE VISION STANDARD PRODUCE WORK OF AVERAGE OR BETTER QUALITY
THOSE NOT MEETING VISUAL REQUIREMENTS
BAD WORK
75% MORE
only 33% OF THOSE WHO DO NOT MEET THE VISION STANDARD PRODUCE WORK OF AVERAGE OR BETTER QUALITY

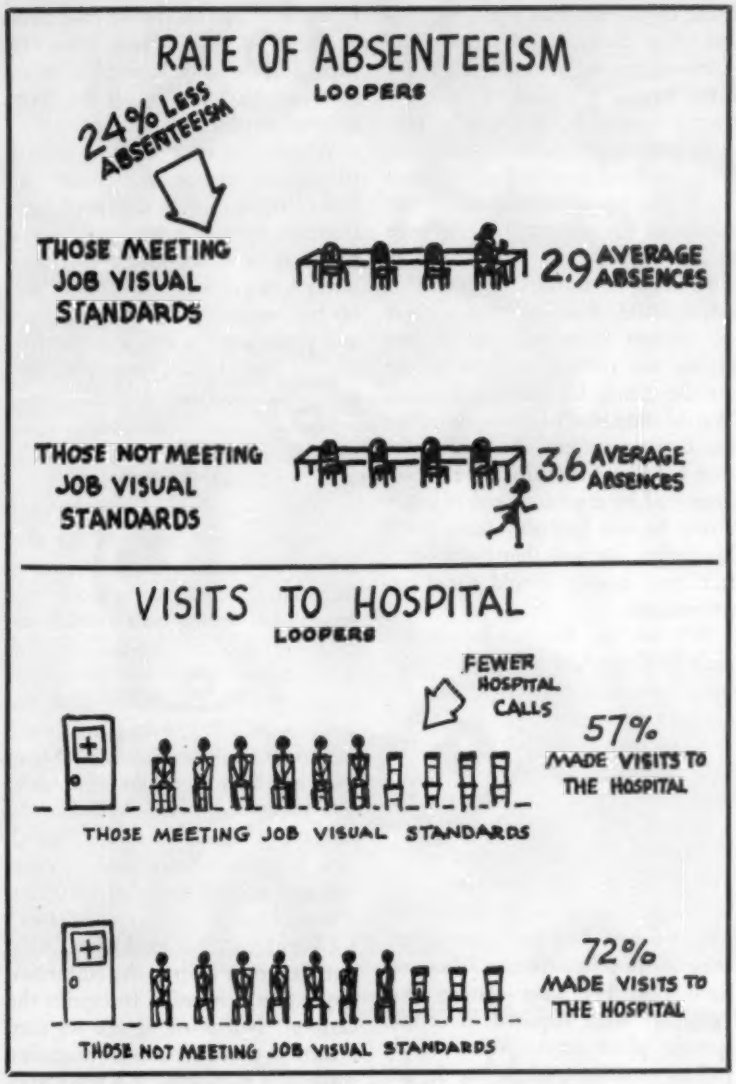
time going to and from the instrument. We test employees exactly as they work on their job. If they wear glasses we test them with glasses. In our state the Workmen's Compensation Act holds that industry is responsible for loss of vision under certain conditions. Therefore, we check those employees who normally wear glasses, without their glasses, at our distant skills so that we can know the legal status regarding their vision. This is done for legal purposes only and is never used in setting job visual standards.

At first we employed a technician who was trained to operate the instrument. We have since trained one of our own employees to operate the instrument. Testers must have the confidence of the employee and it is certainly a help to have a "slick chick" as a tester. She surely can aid in selling the program.

Setting the Visual Profile

In setting a visual profile, or standard, we separate the better employees from the poorer employees. We compare their scores on the vision instrument and if the good employees have substantially different visual skills we assume that these skills are necessary to that specific job. In the larger departments we use only the top 25 percent of the better employees and in the smaller departments we use the upper 50 percent. In comparing the 12 visual skills which the instrument tests, it is relatively simple to establish the visual profile for specific jobs.

Where specific methods for determining an employee's efficiency are difficult to obtain, a simple merit rating system may be used. One method is to place the name of the employee on a small card and tell the supervisor to place the good employees in one pile and the poor employees in another pile. Then, the assistant supervisor does the same thing. The results show that those employees who are rated good and those employees rated poor by both foremen are usually the same. Where there is a difference in opinion of the two raters we eliminate them when we establish our visual pattern. Naturally, where a formal merit rating procedure is used the results are more accurate.



You will find that the old standard of 20/20 on the Snellen Chart is not a proper visual test for all job operations. Where a job requires very good acuity at near point, the Snellen Chart would probably help us select the poorest applicant for the job. By using a vision instrument to test specifically for near point, we find that we can select those employees who have visual skills necessary to do a particular job. When this happens we reduce our training cost and time and have happier employees on the job.

Where you do not have the trained personnel to establish your own visual standard, test results may be sent to a central statistical department where they will analyze the test results and set visual standards.

What's to Be Done?

What is to be done with an employee whose visual skills do not meet the visual standard for a specific job? We write a letter to that employee explaining that he should see an eye specialist. When we started out we used a form letter, but we have found that a personal letter has been more effective for

those employees who are sub-standard. For those employees whose vision meets the standard we use a form letter. The secret for continued success of any vision program is to supply the employees with their results as soon as possible after the test is taken. We try to get the results of the test to the employee in 24 hours.

In the letter to the employee with sub-standard vision we explain that we do not know whether or not glasses are needed or whether or not he needs his glasses changed. We do state that his vision is below the department standard. We further tell him that if he has his eyes improved by a professional eye specialist he will probably have fewer headaches, etc. and that his production and quality should show improvement.

We pay for the employee's eye examination when we refer him or her. The employee pays for any glasses except safety eye wear, which the company pays in its entirety. We permit payroll deductions for any glasses prescribed by an eye specialist. We find that payroll deductions speed up an employee's visit to the eye specialist.

When it comes to protective eye wear we have had the same experience as many industries when we have posted notices stating that "goggles" were required in certain specific plant areas. We recently had an experience where the department refused and we were faced with what amounted to a sitdown strike or the withdrawal of our directive. We withdrew our directive and applied a much more sensible solution to our problem.

First of all we brought in our testing instrument and decided that we would utilize protective eye wear which was adequate from a safety standpoint and at the same time had eye appeal, particularly for the ladies. Of prime importance was the comfort which could be obtained from glasses which were not of the goggle type. We are supplying to our employees eye wear which approximates the types of glasses an employee would normally use for street wear. The heavy and hot goggle type glasses have been utilized only in very hazardous areas. In these hazardous areas we have insisted on side shields.

We do not have safety eye wear throughout the entire plant. In order that our safety director, safety committee, and supervisors know who has been supplied with these safety glasses, we have posted lists of the names of these employees and periodically a check is made to assure that these employees are wearing these safety glasses.

Cause for Failure

The failure of many vision and safety programs is that follow-up is forgotten. I have been in plants and seen vision testing instruments covered with dust despite the fact that they represent a rather substantial capital investment. Articles on the bulletin boards and in plant house organs certainly stimulate and keep alive any human relations program. We have used, very effectively, the cartoon approach in selling our vision program. From time to time national magazines have clever cartoons on vision. As a rule the use of these cartoons can be obtained without charge by writing the editor and requesting permission to reprint the cartoon. Not too long ago we used a cartoon from a national magazine showing a man reading a newspaper with glasses fastened to his elbow and his wife saying it's about time he had his glasses changed. It was funny, and at the same time there was a close-to-home moral to the story.

We make sure that all eye specialists in our community are given a copy of our visual standards. We have had several groups of eye specialists visit our plant. Following the plant tour we have had open floor discussions of our visual problems with these specialists. Always, we make sure that the specialist knows the distance the operator works from his job and at what angle the work is done. When the employee goes to the eye specialist he carries with him a copy of his test on which we mark in red our standard.

Occupational glasses, whether they are safety wear or otherwise, are paid for by the company. We define occupational glasses as those which are needed on the job exclusively and which would be practically useless to the employee elsewhere. An exception to this, of course, is our safety eye wear which are prescription lenses and which could be used at home.

One of our major problems is to see that the safety wear remains in the plant after working hours. The reason for attempting to keep the glasses in the plant is so the employee doesn't leave them at home. At the same time, if he or she quits, we have access to the glasses on termination.

From the Specialist?

What do we except from an eye specialist? It is natural to anticipate that an employee's vision may be improved after proper attention from an eye specialist. Where it is impossible to improve the vision the company should be so advised. In actual practice after an employee has had his glasses changed, or glasses prescribed for the first time, we tell that employee to see us in about 6 weeks in order to see if his vision meets the company standard. Where there is a great discrepancy between the employee's vision and the standard, we advise that employee to return to his eye specialist for a recheck. Often these return visits pay big dividends.

The adjustment of eye wear is very important. It is advisable to have someone in the plant technically trained so that eye glass frames can be adjusted properly. Many of the optical companies run training sessions for in-plant employees so that these employees may in turn fit frames properly.

We are not particularly interested in knowing what is wrong with an employee's vision but whether or not the employee can be brought up

(Continued on page 45)

Mrs. Louise Bane holds her twins, Billy (right) and Wendy (left). Fire Chief Masie is at the right, Assistant Chief Jones at left.

The Rescue of Wendy Bane

Two-month-old Wendy Bane, a twin, was limp and unconscious when the family physician and firemen from the Rennerdale, Pa., Volunteer department hurried into the house. Her respiration had been blocked as the result of a choking spell.

The physician's examination detected no heart beat. He motioned to Fire Chief Jim Masie and Assistant Chief Herb Jones. They quickly strapped the facepiece of a Pneolator over Wendy's nose and mouth. All watched her intently as the instrument fed life-giving oxygen into her tiny lungs. Seconds passed.

Then the physician moved his stethoscope over Wendy's chest again. He looked up. His relieved face told that the heart beat had started. A few hours in the hospital completed the cure. Wendy was taken home.

This was the first emergency case for Rennerdale's Pneolator since the unit was donated to the department by the Woman's Auxiliary. Wendy's mother, Louise, a registered nurse, really means it when she says: "I'll love those ladies the rest of my life."

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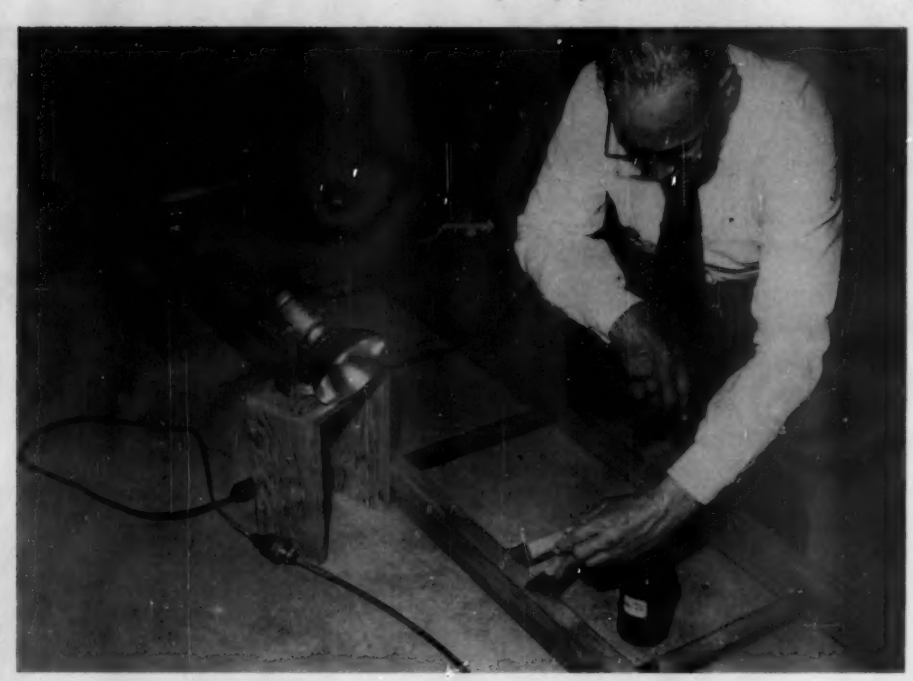
(For details, use Key # E-9 on card on page 77)

INSPECTION—To find tiny but dangerous compression failures, inspector uses oblique lighting and quick-drying solvent to wet wood for clearer look.



THE RESPONSIBILITIES IN LAD

IT APPEARS THAT as long as we have ladders we shall have ladder accidents; primarily, perhaps, because both have always been taken for granted. If we must mount to higher elevations we must use ladders, and when the ladders fail us we are inclined to be all too lackadaisical about the whole thing. It is indeed surprising that, as universally used as ladders are, we still know so very little about them. Certainly the reckless abandon with which some of us abuse them is highly indicative of gross, abysmal ignorance on the part of these ladder users.

Responsibility . . .

If we are to inject a little sanity into this situation we must begin with the ladder manufacturer who has the responsibility for selecting only the best in woods and seeing that these are incorporated in a design best developed to utilize the advantages of wood. It is also the function of the manufacturer to see that the workmanship is first class as well as the fittings or hardware, for unless both pass rigid inspections some dangerous products could reach the public.

For the Manufacturer . . .

Comes now the problem of transportation. After years of inspecting newly received consignments from reputable ladder firms it is a rare experience for this writer to find a completely undamaged shipment. Rough usage in freight car or motor van often played hob with some detail of the ladder's makeup. Step ladders suffered most often and most severely. The damage usually affected the lighter construction of the back braces, especially where nails replaced wood screws in the assembly. Most common carriers are quite cooperative in paying for the correction of such travel damaged units, and the resulting product is fully acceptable from an inspector's point of view.

For the User . . .

To the purchaser or user comes the responsibility of selecting the right ladder for the right job to the end that an otherwise excellent tool is not grossly misused and permitted to be the cause of an accident. For

By PAUL G. ZIEMKE

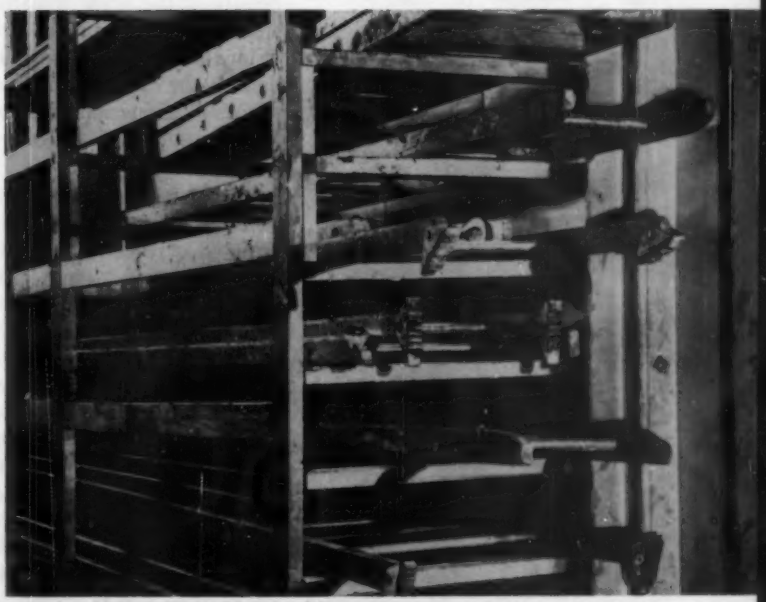
LADDERS & SCAFFOLDS SERIES
more articles in June and July

USE—Two men, having placed ladder at correct angle to wall, are careful to have one man steady ladder and also hold it straight while the other mounts it to lash top securely.

DER SAFETY

many people the term "ladder" means but one thing—a device to gain access to some elevated point above normal reach. There are special jobs for special ladder units, just as there are special craftsman for special craft functions. Ladders must be sufficiently tall to reach the work site so that neither stretching nor reaching are required to perform the work. Step ladders may not readily be substituted for straight ladders, and vice-versa.

Using a ladder as a scaffold plank is a good way NOT to obtain the maximum usefulness from your money. Nor is it a good policy to use the ladder as part of the support of a scaffold where excessive stresses may be imposed on it. Storing a ladder on damp earth, hanging it on wall supports that tend to distort



STORAGE—Here ladders are properly stored on racks to prevent warping, and away from heat to prevent drying out.

its shape with time, or leaving it for extended periods in a hot place are abuses that shorten the useful life of a ladder and tend to produce a tool that may cause a very severe accident.

Wood has several admirable characteristics: such as light weight combined with high strength, and the ability to be easily manufactured. Add to these qualities the readiness with which a ladder may be properly repaired and rot-treated, its high dielectric and low thermal conductivity, and there remains little to be desired of it as ladder building material. Quite a large variety of woods lend themselves to the production of good ladders. Some research has been conducted in the art of using laminated woods, now that waterproof glues and short wave electrical heating techniques have combined to produce a laminate under pressure conditions that shows great promise for the future.

Contrary to the popular opinion, the inspection of wood for the fabrication of ladders is really no serious technical undertaking. Actually each piece of wood can be scrutinized for recognition of its own peculiar composition and structural characteristics. Once this is determined the wood can be classified for the particular type of ladder for which it is best adapted. Wood fibres, like the pages of a book, tell the inspector a host of facts that influence his choice greatly. Where the mere naked eye fails him he has resort to scientific equipment. However, this special technique is infrequently used.

Springwood versus Summerwood

The spring growth of many woods is readily recognized by noting the large and thin walled rings, indicative of the most rapid development of the season. Contrasted with these rings are those of the slower summer growth which are thick-walled and smaller. The 2 rings comprise the season's production of wood fibre since none is produced in the winter months. The thin walled rings present the least desirable wood for ladder production while the heavier growth of summer is more nearly ideal. It is the proportion of summer wood to the spring wood in a given piece that determine its acceptability in the eyes of the inspector.

As the tree reaches its ultimate growth the greater number of cells from the center outward stop growing or conducting sap. Actually they serve little purpose except to give mechanical rigidity or strength to the tree. It is the darker-hued cells in the center of the log that are identified as heartwood. In contrast the outer layers are light-colored and fresh appearing. This is the sapwood portion of the tree. It may vary greatly among similar species, among different trees of the same species, and even in different parts of the same log.

The color of the heartwood appears to have developed a fairly widespread prejudice among wood users, who assume that the color is indicative of poor quality.

This popular misconception, of course, assumes that sapwood, by the same token, is more desirable than the dark-hued heartwood. This is not necessarily true, since the density of the wood actually is the criterion for selecting wood. The change from sapwood to heartwood during the life of a tree does not result in any appreciable change in strength. Hence, color is not significant.

The forest tree is influenced by a host of changing factors that seriously affect the wood produced in the mature tree. Thus it is to be expected that the clear wood of any species varies in density and strength qualities. Change is common to all materials, yet materials differ widely in the amount of variation. Among all this confusion of variability it is reassuring to know that the density of wood substances, neglecting species, is reasonably constant. The value of 1.54 is commonly accepted.

We may assume then that the reason some woods are heavier than others is because some woods contain more wood fibres than others. Put another way—more space is taken up with heavy cells and smaller cell spaces. Therefore, since high density wood contains the most wood substance, it must for that reason become the index for strength properties. Low density woods are thereby eliminated as unsuitable for ladders requiring the ultimate in dependability.

Hardwoods and Softwoods

Actually, the terms are misnomers since the reference should not be to the hardness or softness of a wood but rather to the type of leaves borne by the tree. We should more properly say "trees with broad leaves" for the hard woods and "conifers" for the soft woods. Under the description "broad leaves" we find the hickory, oak, maple, birch and ash. In the "conifers" we find the spruces, pines and cypress.

Moisture Content

With but rare exceptions saw logs are "green" as they enter the mill. Their natural moisture content in the form of sap may be greatly augmented by an extended storage period in the mill's holding pond. The greater portion of this moisture will require removal before the wood becomes acceptable as ladder manufacturing stock.

Both weight and excessive springiness are reduced noticeably as water is removed; initially by storage in special, loosely assembled stacks in the mill yard, later by heated kilns where almost all water is removed under scientifically controlled conditions. Shrinkage is very evident at this time since the wood is dried below the fibre saturation point. It is at this point, however, that most strength properties increase in the prolonged drying process. At this stage the lumber is still in the rough, large dimension pieces which will require additional resawing to bring the stock down to smaller, smooth sections.

Shrinkage and swelling in the direction of the grain of excellent wood is merely a small fraction of 1 percent from the green to the kiln-dried con-

dition and it is of little practical importance in most series of woods. At the completion of the drying process small checks in the wood structure may be detected for the greater length of the section. This is not necessarily an indication of fibre weakness. Rather it is an indication of an excellent drying process which protects a ladder structure against subsequent shrinking. These small checks serve as access mediums for the two applications of boiled linseed oil recommended by experienced ladder men. The oil fills the checks and wood pores so thoroughly near the surface that these are no longer visible to the eye.

Characteristics of Wood

The wood expert is interested in learning to recognize and identify natural characteristics and defects. Many of these are quite commonplace and require no elaboration here; some are prohibited completely, while the balance are tolerated in accordance with the degree they affect wood strength. For the guidance of the inspector the various wood characteristics are listed here. These are items which exclude woods containing such defects from those selected for ladder stocks.

A. Decay—Wood substances disintegrated by the action of cell-destroying fungi. Sometimes identified as "dossey" or "punkey." Discoloration is usually apparent.

B. Wane—That section containing bark or where the bark has slipped off. This occurs most frequently at the extremities of the wood piece.

C. Honeycombing—A type of check somewhat difficult to discern on the surface. Usually detected along the wood rays on the interior of the wood.

D. Shake—A separation along the grain, the major portion of which is between the rings of the natural wood growth.

E. Insect damage—This damage will vary with locale and the types of worms found. The flaws are classified as pinholes, powder-post beetle holes, and grub holes. The latter are probably the most destructive.

F. Compression wood — This growth occurs in softwood under abnormal conditions and is characterized by relatively wide annual rings, usually eccentric, and of a comparatively large portion of summerwood which merges into the springwood without exhibiting a marked contrast in color.

G. Check—A longitudinal separation of the wood, most of which occurs in the annual growth layers.

H. Density—The mass of a body per unit volume. It is an index of the amount of wood substance present in a piece, and, therefore, an index of strength.

I. Compression failure—A pronounced deformation of the wood fibres due to excessive strain impressed on the growing tree by heavy winds, etc. This deformation takes the form of buckling fibres along the grain.

J. Pitch pocket—An opening between rings of growth which is usually filled with pitch, or a combination of pitch mixed with bark. Small pockets are acceptable in most instances.

K. Knot—The remains of a limb buried in the growth of a tree and later revealed by the sawing operations. Their acceptance in ladder stocks is determined by size, quality, and occurrence. Small knots of solid structure and scattered occurrence are not objectional.

L. Cross grain—This, as the term implies, indicates the slope across the grain or deviation of the wood fibres from a line parallel to the sides of the piece. The cross grain condition may be diagonal, or spiral, or both. Cross grain is limited in terms of its slope, which is established as the distance along the sides of the piece in which a deviation of 1 inch occurs. Expressed in another way—cross grain with a slope of 1 inch in 12 means that in a distance of 12 inches the grain deviates one inch from the edge of the piece. The slope of the grain is measured over a distance that will assure the determination of the general slope of the grain not influenced by local deviations.

(Continued on next page)

Man in picture above unwisely climbs this ladder improperly angled against the wall.

Broken rung marks this ladder unusable.

Makeshift ladder shown above is flagrant violation of safety and invites accident.

The "Safety Code for Portable Wood Ladders" of the American Standards Assn., defines the irregularities in wood that affect the durability and strength for stock intended for ladders. The restrictions on such natural characteristics are in accord with their effects on the strength properties.

Most ladder stock inspections are confined to an overall visual check, before and after fabrication. Most defects such as pitch pockets, knots, checks or slightly rotted sections are easily detected with the eye. This, however, is not true with such defects as cross grain, compression failures, shakes and honey-combing which require detailed examination.

Rot

Since wood decay is the most prevalent defect we shall devote additional attention to the subject here. The condition is brought on by the presence of fungi, or living organisms which thrive on wood substance. These fungi require favorable conditions for their development with respect to moisture and temperature, plus air. If any one of these is eliminated the development is arrested, if not completely eliminated. In spite of the popular theory of "dry rot," wood that is never wetted will not rot.

No method is known to accurately determine the weakening effect of fungi on wood fibres. Different types of fungi affect wood differently. The presence of incipient or advanced wood rot can usually be quickly detected by the presence of discoloration, pitting of the wood, or obnoxious odors. Molds and staining fungi are usually not critical with respect to strength compared to decay organisms. However, conditions that favor stains and molds are also ideal for the growth of wood-destroying fungi. Since decay even in early stages may greatly reduce some strength properties, stained lumber may well be excluded for ladder stock choice.

Ladders should be inspected frequently to detect possible evidence of damage to determine whether repair is needed, and whether they have become otherwise unserviceable. Good maintenance practice requires that the joints between steps or rungs and side rails be kept tight, that hardware and fittings are securely attached, and that movable parts operate freely and effectively. When they are rusted and hard to manipulate a judicious drop of oil in the right places will work wonders, and a little mineral paint over the hardware will add years of usefulness.

Painting Ladders

The question of painting ladders, scaffold planks, swinging stages and trestles is like the poor, always with us. It is such a simple deduction for the average person to make—you paint most all other lumber articles. Why not ladders and their associated equipment?

Practically all ladders are sold untreated, the exception being special items receiving extra treatment such as fire truck ladders, etc. The untreated state of the ladder makes it readily possible to conduct a thorough-going check of the quality of the wood and the manner in which the hardware is applied. Over-aggressiveness in the manner in which the riveting is done has condemned many an otherwise fine piece of workmanship. Many ladder users make a practice not to treat the wood at all.

This is certainly a mistake with such woods as Sitka Spruce, Noble Fir, Western Hemlock and Douglas Fir since they are far too soft to withstand the knocking about accorded them in daily use. This is especially true of equipment used outdoors such as linemen and contractors require. Untreated wood has a vicious way of developing long slivers that have been known to pierce several layers of heavy clothing as the ladder was carried on the shoulder.

For owners who wish to preserve and waterproof their investments there are several excellent finishes available. Probably the outstanding, though expensive one, is spar varnish for outdoor use. Next in popular demand is what some term "hard oil finish," or about two applications of boiled linseed oil, either dipped or brushed on. Shellac, with its limited resistance to water exposure, is relegated to in use only.

Many states forbid the use of opaque paints for ladders and allied equipment. The reasons are two-fold: the paint hides all the defects from the view of the user or inspector and the mineral and linseed oil combination develops something of a semi-impervious film on the exterior of the wood which excludes moisture under only the most ideal conditions. This means that under any continued exposure to wet conditions the water will penetrate, especially at the joints between rungs and side members, where rot is least desired. This same film that failed to exclude the moisture originally, now is slow to permit its escape and unsuspected rot occurs when least suspected. It's sheer fallacy to establish a ladder-painting schedule, as some firms do, since the new coat of paint merely adds concealment to a host of defects that would otherwise be readily detected by user or inspector. Painting itself does not increase durability or resistance to decay.

Ladder Testing

Much has been said and written about the art of "testing ladders." An old rule-of-thumb among many painting contractors has the boss jump on each flat laid rung with both feet to determine the soundness of the joint between ladder and side member. It is, of course, quite obvious that such an heroic measure can develop only one result: if the brutal test did not break the rung's fastening the obvious odds are that it will fail later, perhaps with disastrous results, as a worker reaches the top rung.

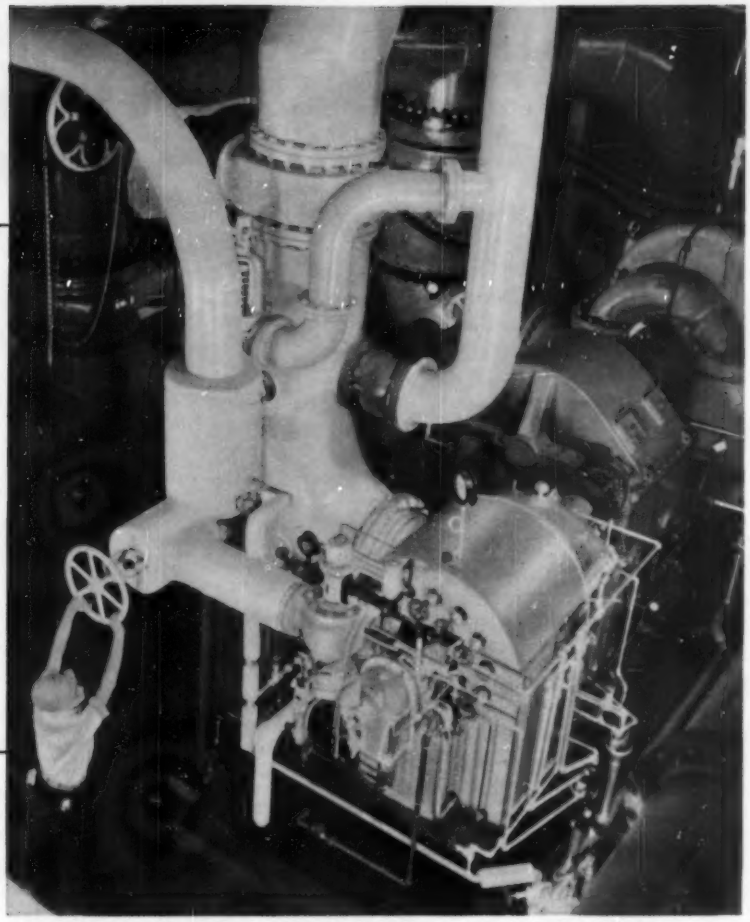
Then there is the old, old murderous technique of suspending the ladder between two raised objects and then jumping on its center. The mere fact that it does withstand the test by no means indicates a sound ladder. In fact all too fre-

For copy of booklet described opposite use Key # E-10 on card on page 77.

Pittsburgh COLOR DYNAMICS®

Helps Improve Safety Record 400% in Steel Mill!

Putting color to work in Jones & Laughlin's cold finishing department increases safety record from 1,027,000 man-hours without time-loss accidents to an all-time high of 4,858,579!



Forests of huge pipes in pump and boiler houses of J & L's Pittsburgh Works are easier to identify since pump lines were painted in dark green with black bands, and vacuum lines in yellow with bands of green and white.

BY MAKING workers more safety conscious, focusing their attention and minimizing fatigue, Pittsburgh COLOR DYNAMICS has helped to lower the accident rate phenomenally in the cold finishing department of the Pittsburgh Works of the Jones & Laughlin Steel Corporation.

During the time this department was painted according to ordinary shop practice, its best safety record was 1,027,000 man-hours without a lost-time accident. Since being repainted according to COLOR DYNAMICS, its safety record has zoomed to an all-time high of 4,858,579 hours. *An increase in safety of nearly 400%!*

"Naturally, we are very pleased with such improvement in our workers' safety," comments Superintendent Joe Seyler, of the mill's cold finishing department. "But we believe that this is just one of many benefits that have resulted from putting color to work the COLOR DYNAMICS way. By using eye-rest colors on stationary or non-critical parts of machines we have made these areas seem to recede. By contrast, moving or critical parts have been made to stand out. Our operators see their jobs better. With less eye strain there is less fatigue, and lessened fatigue results in more and better productivity.

"Eye-rest and morale-building colors on walls and ceilings have provided more pleasing surroundings that have enhanced the morale of our workers. They take pride in keeping their work areas cleaner and more orderly, thus simplifying housekeeping. And we get all these benefits without paying any more than conventional maintenance painting has cost us."

Why not test the practical value of COLOR DYNAMICS in your plant? Paint a machine—or a department or two—and see the difference it makes in efficiency, morale and safety.

Get a FREE ENGINEERED COLOR STUDY of Your Plant!

● Send for our free book which explains simply and clearly what COLOR DYNAMICS is and presents scores of practical suggestions on how to apply its principles. Better still, call your nearest Pittsburgh Plate Glass Company branch and ask to have a representative give you a comprehensive engineered color study of your plant without cost or obligation. Or mail coupon.

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quently the reverse is true since the ladder was never designed to carry such an abnormal load. The test may develop injuries in the form of compression failures that may be the source of sudden failure and serious accident in the future.

My advice is, therefore, **DO NOT TEST LADDERS.** According to reports of the U. S. Forest Products Laboratory, manufacturers and municipal fire departments frequently have applied tests to ladders. All had essentially the same objective, to apply a load equal to or greater than that which the ladder was expected to carry. And, although the ladders passed the tests at the time, stress during tests often caused permanent weaknesses that in time were direct causes of failures.

With wood ladders, for example, compression failures are the most common ones. They occur when the slender, tube-like fibres that compose wood are squeezed too hard lengthwise. These fibres buckle and are damaged by deformation of their walls. When a ladder rail is bent sufficiently, groups of these fibres buckle forming rather continuous lines on the surface of the rails. If a ladder is bent far enough obvious wrinkles will appear. Wrinkles indicate damaged wood fibres. When excessive loads are then applied to that section of the wood, failure or collapse occurs.

There are many more examples of tests administered to ladders by consumer groups but the concensus of opinion is still—**DO NOT TEST LADDERS.** A test may show a stiffness, but stiffness is not indicative of strength. It may reveal that the ladder can carry loads, and in doing so promote weakness of fibres. Learn to detect weaknesses by inspecting wood surfaces for fibre failures.

Single or extension ladders are not designed to carry loads when horizontally bridging a gap between two supports. This is the function of special staging material designed expressly for that purpose. The larger wood ladder manufacturer has them in stock in various sizes.

It is to be remembered that ladders are used for extraordinary duty at the owner's risk since the ladder will serve safely and well only if used for the purpose for which it was designed. The National Safety Council defines a ladder "as an appliance usually consisting of two side rails joined at regular intervals by crosspieces called steps in ascending or descending." The council recognizes twelve types of ladders in common use classified as stepladders, single ladders, extension ladders, sectional ladders, trestle ladders, extension trestle ladders, special purpose ladders, trolley ladders, side-rolling ladders, fire ladders, fixed ladders, and portable ladders.

Law of Gravity

When man moves at an elevation above that of terra-firma he immediately is in conflict with the law of gravity which means that if his support fails him, he falls, the severity depending on the height involved. Thus, the use of a ladder presents a variety of accident possibilities and requires definite planning and precautions, to be observed by all concerned with ladders. The procurement department must buy only from reputable manufacturers in the types and kinds best suited to the work intended. The inspector must scrutinize every inch for possible damage resulting from transit, and manufacturing defects that may have escaped the eye of the finished product inspector. The rest is up to the user on whom rests the responsibility for exercising good judgment in the use and care of the ladder through the years that it may serve.

ASA Press Code

(From page 11)

explain new terms used. A diagram is included to show suggested arrangement of control circuits discussed in the code.

A compilation of accident reports several years ago indicated the need for a national uniform code for controls and signaling devices for presses. The Printing and Publishing Section of the National Safety Council in 1951 asked the American Standards Association to establish a committee to work on a solution to the problem. Administrative leadership for the project was furnished by the Research and Engineering Council of the Graphic Arts Industry and the National Safety Council.

Cross Section Committee

The committee who developed B65.1 represents a wide cross section of interest in the project. National organizations who supplied personnel to serve on the committee included: Amalgamated Lithographers of America, American Newspaper Publishers Association, American Photo-Engravers Association, American Society of Mechanical Engineers, American Society of Safety Engineers, Association of Casualty and Surety Companies, Book Manufacturers Institute, Inc., Education Council of the Graphic Arts Industry, Inc., Folding Paper Box Association of America, Gravure Technical Association, International Association of Electrical Inspectors, International Photo Engravers Union of North America, International Printing Pressmen & Assistants' Union of North America, International Typographic Composition Association, National Association of Mutual Casualty Companies, National Electrical Contractors Association, National Electrical Manufacturers Association, National Printing Equipment Association, Inc., National Safety Council, Printing Industry of America, Inc., Research and Engineering Council of the Graphic Arts Industry, Inc., and the U. S. Government Printing Office.

Copies Available

The American Standard Safety Code for Controls and Signaling Devices for Graphic Arts Presses is available from the American Standards Association, 70 East 45 Street, New York 17, at 50 cents a copy.

Keeping up GOOD MAINTENANCE in a Woodworking Plant

The woodworking plant employee in the picture above is protected against accident by a guard which grabs boards from his band resaw and pushes them away from him . . . but he also needs good housekeeping procedures to fully protect him.

By LAWRENCE E. EISELE
Personnel Supervisor
Kroehler Manufacturing Company
Naperville, Illinois

UNDER WHAT CONDITIONS do we want to spend those hours that are spent at work? How do we want to keep the area in which we earn our living? If it is like our homes, orderly and clean, we certainly can spend those hours, even though they are working hours, in an enjoyable place where we are safe and happy.

In the first place, "What is good housekeeping?" All plants have janitors, supposedly enough in each department or division to keep the plant orderly and free of refuse and dirt. However, good housekeeping goes a little further than that. I think we can agree that good housekeeping means keeping your department in a clean, workable order that is conducive to favorable working conditions, good production, and high employee morale—coupled with safety!

Is it enough to think that the janitor will do all this for us? Can we rely on his daily routine to keep our departments and divisions in such good order? Perhaps some have found such janitors in their shops, but we have certainly been unable to find such competent men in ours. We have determined that it is a departmental job as well as an individual worker's job, or part of his job, to recognize good housekeeping. We at our woodworking plant, are interested in good housekeeping from the president of the company on down to the worker. As part of our company policy, housekeeping is given an important place in the workings of our organization.

Regular inspection trips by authorized personnel through the entire plant, with written reports on the observations made, and recommendations for improvements, are given to the works manager at regular intervals. These aid him in following up on lax housekeeping in any part of his line organization.

This subject is not new to us. We have been living with it ever since our plant was established, 60 years ago. It is certainly one of those things that you can never do without! Something you must live with! Since we recognize that we have to get along with this good housekeeping business we might as

well make it as easy as possible on ourselves.

Therefore, we have set up a weekly foreman's inspection report that is sent to the works manager, designating certain things that the foremen believe should be done in their departments to keep them in good order. Such reports are reviewed, and the suggested conditions are corrected; or the foreman is given an answer as to why such work should not, or will not, be done. In this way we feel the foreman will certainly go over his department before making out such a report.

He certainly will not say that the windows are all in good repair when 3 or 4 of them are broken. The assistant works manager goes through the plant at least once a week on a general tour and makes notes of areas that he feels are not up to housekeeping par. Reports and inspection generally keep our foremen on their toes in regard to housekeeping. We have a form we use for this foreman's weekly report.

Regular Inspection

This sounds as if we possibly have everything under control—with no problems; but we're all human and once in a while we'll get a report from the works manager that might say, "We're slipping on Housekeeping." This did happen. We decided some type of drastic action would have to be taken, but on the other hand we felt perhaps, some type of contest might be more in order, something to stimulate the foremen, something to give them a little more interest in this dull job of constant housekeeping.

Merit System Contest

So we did set up a contest for them, based on a merit system for good housekeeping, with 100 as a perfect score. The duration of the contest was 8 weeks. The 3 top scoring departments were given prizes for their efforts. At one of the weekly meetings with our foremen, it was explained that a housekeeping inspection would be made weekly by a member of the management group. This could be one of the superintendents, an inspector, personnel supervisor, assistant works manager, or possibly one of the engineers. A new form would be devised for each department with certain items listed and merit points established for such items. As an example, No. 1 might be: "Is the department clean of obsolete material, milk bottles, coke bottles, spoiled material, and so forth?" We might give that particular item a value of 6.

The Perfect Score

The second might be: "Are aisles clearly marked?" Another might be "Are materials and supplies stored neatly?", and another "Are window sills clean?"—Are all windows intact?, Is the desk and office clean and in order?"

Each one of these items would be given a certain value up to 100, the perfect score. The foreman would be asked to go through his department with the inspector so these conditions could be pointed out and corrected. The foreman had already sent in a weekly housekeeping report. If he had noted, shall we say, that he had one or two broken windows and we also found it on the inspection, he would be given credit for that point because we would assume that the maintenance department had not had time to correct the condition.

When put into effect this inspection certainly created a lot of interest. Since we were having foreman's meetings weekly, we reviewed the reports made of the inspection, as well as the reason why totals were changed according to the housekeeping report that was sent in by the foreman weekly. This created rivalry between the departments and produced the results which we were looking for. The interest in this contest permeated down to the employees through the foreman's efforts. I would say everyone became "housekeeping conscious" during those 8 weeks. We prepared a record of weekly results. We had it ready for the weekly meetings. At that time every foreman could see just where he stood in the contest.

After the contest was over, you might wonder what was gained by this housekeeping inspection system. We found that there was better cooperation between worker and management. Certainly, better working conditions resulted. A safer place to work was naturally the result because certain unsafe conditions were corrected. There was more working area available because obsolete equipment was not stored in the working areas. All employees and management experienced an all-round feeling of self-satisfaction and pride in a good-looking department.

From an address delivered at the 41st National Safety Congress.
Picture by courtesy of Weyerhauser Timber Company.

Nuclear Society Meeting

AN ORGANIZATION composed of scientists and engineers engaged full-time in industrial, governmental and educational aspects of atomic energy activity. The American Nuclear Society, has announced plans for the first professional nuclear society meeting. The three-day session, which will coincide with the first annual meeting of the American Nuclear Society, will be held June 27–29 at Pennsylvania State University, State College, Pa.

The meeting will be representative of all major interests in peacetime atomic energy, according to J. A. Lane, director, reactor experimental engineering division, Oak Ridge National Laboratory, program chairman. Included will be papers on fast reactor technology, experimental nuclear techniques, radiation effects on biological and physical systems, sources and economics of reactor materials and nuclear chemical problems.

The conference has been specifically designed to appeal to engineers, physicists, chemists, life scientists and metallurgists, Mr. Lane said. Papers presented will deal with new and interesting data not previously

published in the nonsecret literature of the atomic energy field.

The meeting will be similar in concept, according to Mr. Lane, to the International Conference on the Peaceful Uses of Atomic Energy to be sponsored by the United Nations at Geneva, Switzerland, Aug. 8–20.

The meeting will be open to nonmembers, as well as members of the American Nuclear Society. There now are approximately 400 members of the organization. Detailed information concerning the meeting may be obtained from Prof. W. W. Miller, Pennsylvania State University, State College, Pa.

Editor to Address Midwest Safety Meet

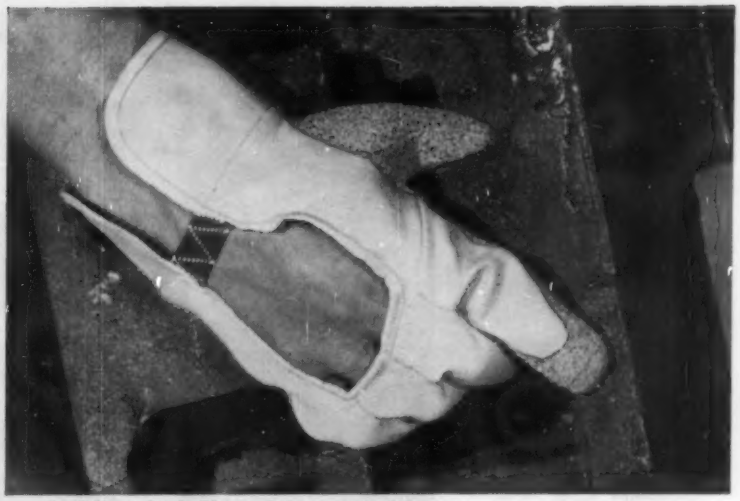
AMONG THE SPEAKERS at the 32nd Annual Midwest Safety Conference, sponsored by the Greater Chicago Safety Council, will be Harry Armand, Editor of *SAFETY MAINTENANCE* and the Safety Publications Division of the Alfred M. Best Company, Inc. Mr. Armand will deliver an address at the May 4th session in the Assembly Room of the Sherman Hotel in Chicago.

Design Engineering Show Postponed

THE DESIGN ENGINEERING Show, scheduled to be held in Philadelphia in May, has been postponed until late Spring in 1956, it was announced by Clapp & Poliak, Inc.

Although two successful shows have been held under the name of the "Basic Materials Exposition," it was decided late in January to expand the concept of the exposition and conference to encompass all aspects of design engineering. However, it was found that sufficient time was not available to arrange for the necessary changes by May of this year.

The 1956 event will be staged in Convention Hall, Philadelphia, and the Design Engineering Conference will be held concurrently with the show.



Cool Vent-Back Glove: Palm coated with sure-gripping, long-wearing, rough textured natural rubber.

Costs 40% to 70% less to protect hands with palm-coated gloves

Coated palms outwear canvas or leather palms. Fabric backs give comfortable ventilation.

NEOX No. 93

Handling sharp-edged materials, wet or dry: Palm-coated with NEOX (specially reinforced neoprene) which is unequalled for resistance to cutting and puncturing and does not absorb grease or oil. Job-fitted for handling such materials as strip and sheet metal.

Grappler No. 362

Handling abrasive materials, wet or dry: This Grappler glove is palm-coated with DUROX, a leather-like plastic that outwears ordinary plastics 50% and retains its grip when wet. Band top and knitwrist styles are also available in regular plastic coating. All Edmont plastic coated gloves have wing thumbs and best fit of any coated work gloves.

Grab-it No. 62-W

Handling sharp, abrasive or slippery materials, non-oily: Grab-it type, palm-coated with rough-textured natural rubber which has remarkable non-slip grip, as well as long-wearing qualities on rough work. Available in knitwrist style, also.

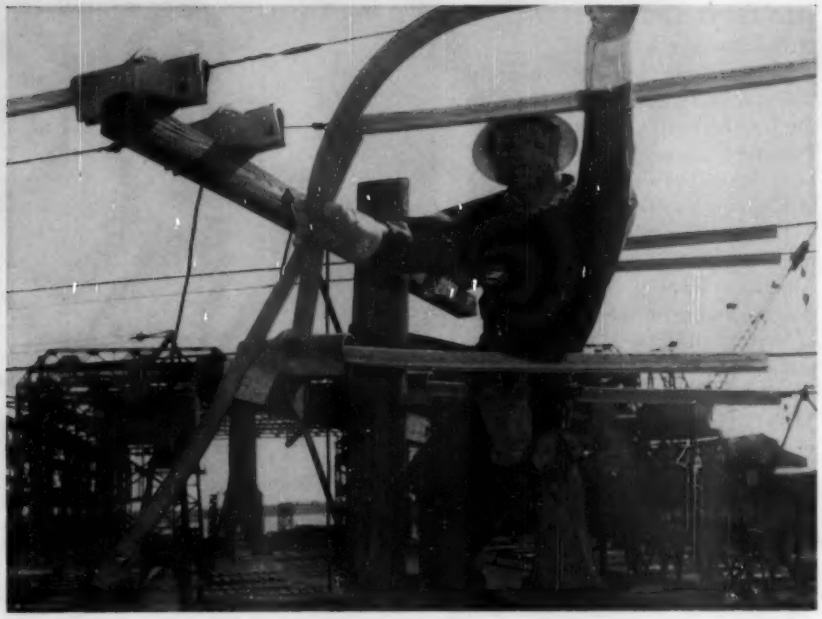
Free Test Offer to Employers: Send brief description of your operation, materials handled and temperature condition. We will recommend the glove (palm-coated or fully coated) that best fits your application, and forward samples free of cost, for testing on-the-job. Our laboratory also develops special gloves for special applications.

Edmont Manufacturing Company, 1256 Walnut Street, Coshocton, Ohio

World's largest maker of coated industrial gloves, available through all leading industrial suppliers.

Edmont job-fitted gloves

(For details, use Key # E-11 on card on page 77)



FINALLY — He puts up rubber line protectors the "safe way" —from below. When he comes down he works the same way—taking off the "rubber" above him first and working his way down to the ground.

ONE MIGHT SUPPOSE that it would be unnecessary to make a plea for "full use of protective devices in electric line work." My contention is, however, that most of us fall far short of the objective of full protection. It is only by full use that we can eliminate the present needless and tragic losses among electric line workers.

Year after year, they suffer the greatest number of fatalities in the electric utility industry—about 60 percent of the total, or about 90 of the average 150 fatalities per year, based upon recent Edison Electric Institute figures.

Line work is inherently hazardous. The wires and devices which linemen work on regularly carry voltages which can kill. But, like other hazardous work, it can be made safe if the protective devices which have been developed are used. I refer to the usual rubber goods (line hose, insulator hoods and blankets) which should be used to cover conductors and equipment in the vicinity of the linemen; and to the principal items of protective equipment which should be worn by the lineman (rubber gloves, rubber sleeves and insulated hard hats).

These protective devices are inexpensive and can all be purchased "over the counter" in any quantity. With the possible exception of rubber sleeves and insulated hard hats, they are probably all in use to a greater or lesser degree by every electric public utility in the country. If they were used as they should be, few, if any, linemen would be killed or burned by electric shock. Yet the sad fact is that an average of about 110 electric utility workers, mostly linemen, are killed each year by electric shock or burns. Doesn't that indicate that we should do something about it?

Line Hose, Insulator Hoods and Rubber Blankets

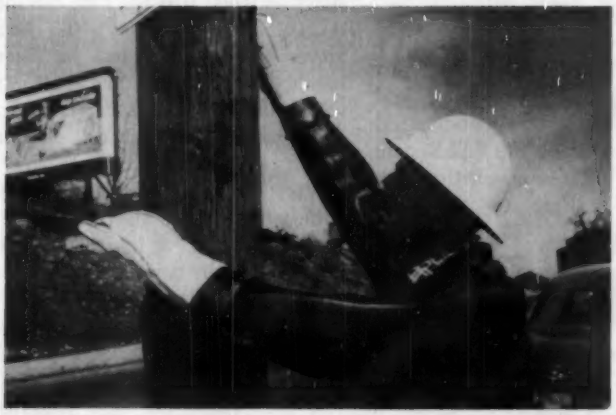
Let's consider in some detail the use of these protective devices. First, the group commonly referred to as "rubber goods." These include line hose or "snakes," insulator hoods and rubber blankets. There are other special devices, but these 3 are the principal ones. They are about all that are needed to cover conductors, insulators, secondary racks, cutouts, transformers, ground wires, guys, telephone messengers and cables.

They should be used to cover all parts of conductors or equipment which the lineman might contact with any part of his body, by reaching, slipping or falling. They should cover primary, secondary, street light and ground conductors, and live or ground equipment. Remember that secondary or grounded conductors are just as dangerous as primary wires, because in nearly all shock cases on poles there is, in addition to the primary or live contact, a contact with ground or near-ground through which the lethal current leaves the body.

Remember also that no wire can be ignored and left uncovered on the assumption that it is harmless, as for instance a series street light wire normally "dead" in the daytime. Such wires are often crossed up with energized wires and are then as much of a booby trap as any wires on the pole. I have seen just that happen on our system, with needless fatalities resulting.

There is a right way to install these rubber devices. In general, from the ground up as the lineman climbs the pole, covering the wires and equipment from below, not from above. The nearest wires on

This Man Needs All the Safety He Can Get!



THEN—He completes the picture of what the safely-dressed lineman should wear with his non-conductive hard hat planted firmly on his head.

By F. G. HARRIMAN
Safety Manager
New England Power Service
Boston, Massachusetts

the arm should be covered first, then those farther out. In this way he protects the area through which he is going to climb and in which he is to work. Conversely, when he finishes his work the rubber should be removed, starting at the farthest top wire on the pole. He should remove each piece from below, so that he always has protection in the area in which he is working.

One frequent source of trouble in connection with the use of line hose is the uncovering of too much of the wire to be worked on. Just because a wire is to be tied in, or a tap made to it, the entire wire does not have to be left uncovered. The safe way is to cover all but the few inches involved in the work.

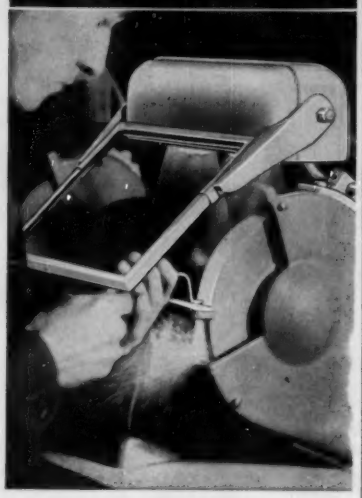
Another detail often overlooked is the covering of short taps between line conductors, leads to transformers and cutouts, etc. Short pieces of line hose should be used for this purpose. Remember that a few inches of uncovered wire often provide the contact which kills or burns.

More could be said about the use of rubber goods on the pole, such as anchoring line hose so they will not slide and expose part of the wire;

NEXT—He puts on the all-important rubber gloves before he climbs pole. He does not take them off again until he is on the ground safely.

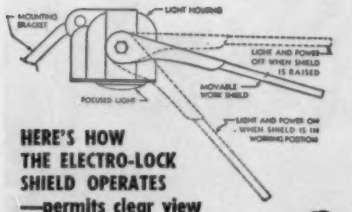
FIRST—Lineman dons rubber sleeves before mounting pole to protect against arm and shoulder contact with a possible live wire.

JUNKIN
ELECTRO-LOCK SHIELD



The Shield Which Commands Operator Safety

The position of the Junkin Electro-Lock Shield is controlled by mercury switches. Interlocking power and light circuits will not permit the machine to operate unless the shatter-proof shield is in a completely protective position. Affords perfect visibility, and protects the operator from flying particles. Write for free bulletin No. 103.


MOUNTING BRACKET
LIGHT HOUSING
LIGHT AND POWER OFF WHEN SHIELD IS RAISED
MOVABLE WORK SHIELD
FOCUSED LIGHT
LIGHT AND POWER ON WHEN SHIELD IS IN WORKING POSITION

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(Use Key # E-12 on Inquiry Card on page 77)

or use of double lengths of line hose where there is any chance of the man reaching beyond a single length, etc.

What I want to ask is the blunt question: "Do all linemen always do a thorough job in covering wires and devices on the pole?" Management must see that it is done by every crew, all the time. They must have plenty of line hose, hoods and blankets; and they must understand that (to paraphrase the Bell System motto) no job is so urgent that they cannot take time to cover up thoroughly.

Now let's go on to the next principal item of protection: rubber gloves. You may say: "Why talk about them? Of course all linemen use them." To which I will reply: "Then why do our industry records show that for the last 5 years an average of 26 men (mostly linemen) were killed by hand contacts each year?" Rubber gloves just don't fail in service. The answer is that these men were not wearing their rubber gloves; if they had been they would not have been killed. The reason, of course, is the great variety of so-called "rubber glove rules" in use in the industry. There are 5-foot rules, 3-foot rules, primary work area rules, "use- 'em-when-you-feel-like-it" rules, and many others. It is my observation and firm conviction, based upon over 25 years of close association with line work, that such halfway rules never have, and never will, protect the men.

In my estimation there is one simple solution and only one. That is the 100 percent or "ground-to-ground" rubber glove rule. If the rubber gloves and keepers are put on before the lineman starts up the pole, and not removed until he is back on the ground, he cannot receive a shock from hand contact. It is as simple as that. Any other rule under which it is left to his judgment when or whether he should put on his gloves is bound, sooner or later, to result in an error and a possible contact. We've seen it happen so many times that it isn't funny. "I didn't think I was so close to that wire." "I was just going to put them on." "I didn't suppose that brace was alive."

Why are these chances taken when the ground-to-ground rule will positively eliminate them? Don't let anybody tell you the ground-to-ground rule is impractical; that it slows up work; that the men cannot do certain operations with their gloves on; that it is bad for their hands; that it is hazardous to climb with gloves on. Over 23 years ago when we adopted this rule in our largest operating company, of which I was then superintendent of distribution, we had all these objections thrown at us; and experience has proved there was no truth in them. You will always get objections to change on the part of the men. That large company is still operating on the ground-to-ground rule and would not now consider going back to a part-way rule.

I realize that union agreements make changes, such as the adoption of the ground-to-ground rubber glove rule, sometimes difficult. But I believe that it is a clear duty to protect linemen; and that if the facts are laid before the union representatives they will go along. We have found that to be the case in many instances.

I am aware of the fact that the operating superintendents and even the safety representatives of some of the major electric utilities in this country do not agree that ground-to-ground use of rubber gloves is desirable. Some say that their conditions are different; they have greater than average clearances on their poles; or men always put on their gloves when they should. I know and respect the opinions of many of these "conscientious objectors"; and I am not suggesting legislating this rule, or even taking an industry stand as favoring it, since that might be embarrassing to them. I am merely stating my personal opinion, as strongly as I can, that full protection requires this rule. Anything else is only partial protection. With the ground-to-ground rubber glove rule in effect, and strictly enforced, power companies will have gone all the way to eliminate one of the chief hazards of line work.

The third principal item of personal protection for linemen is rubber sleeves; shoulder length rubber sleeves. These are not new, but they have certainly not been in general use. Their use is rapidly increasing, however, and I can show that there is a strong argument for their more general use.

Electric industry fatality figures show that for the last 5 years there was an average of 18 men (again mostly linemen) killed each year by arm or shoulder contacts. Next to hand contacts the arm is, as might be expected, the part of the body most vulnerable to contact in line work.

We recently analyzed our own system accidents for the last 17 years in electrical contact cases to discover the part of the body making contact. During these 17 years, we had a total of 132 contact accidents. Only 33 were hand contacts (demonstrating our increasing use of the ground-to-ground rubber glove rule), 73 were arm and shoulder contacts and the remaining 26 were body, head and foot contacts. The 73 arm and shoulder contacts make up 55 percent of the total in our experience. As a matter of record, 43 of the 73 resulted in no disability, 22 were lost time and 8 were fatalities. These facts indicated clearly to us that the arms and shoulders accounted for by far the greatest number of contact accidents on our system and demanded attention.

The accident prevention committee of the Edison Electric Institute became interested in this subject of arm contacts and the use of rubber sleeves 2 or 3 years ago, and sent a questionnaire to its members. Of 28 companies or systems reporting, 5 had a mandatory rubber sleeve rule which, in general required the use of rubber sleeves whenever rubber gloves were used. A recent check-up indicates that this number is increasing. An enlightening bit of information from this questionnaire indicated that in the non-sleeve-using companies from which figures were available, the arm contact cases were 22 times as frequent on a man-hour basis as where there was a mandatory rubber sleeve rule. *(Continued on next page)*

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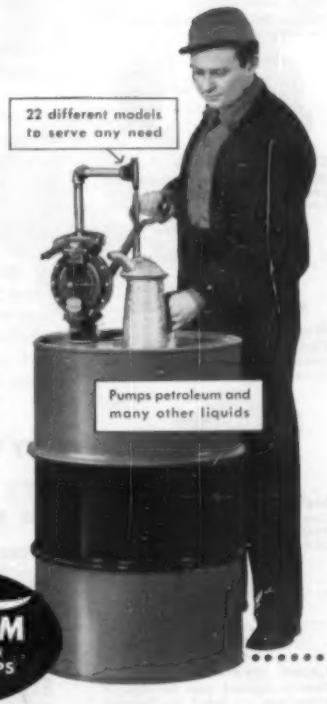

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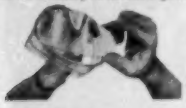

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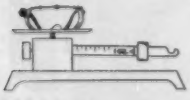
Channeled sides of frame give comfortable clearance over spectacle temples.

Light in weight
Can be worn all day without fatigue—encourage continuous protection.



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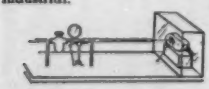

Workers who wear prescription glasses—even big plastic frames—are mighty glad to get the extra roominess provided by NO. 90A MONOGOGGLES. Its greater clearance results in utmost comfort.

Exclusive Willson features described at left encourage workers to wear these sturdy MonoGoggles. Note how large flat .060 plastic lens provides "picture-window" scope of vision—how the deep, transparent light green frame admits side vision while eliminating glare.

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(For details, use Key # E-14 on card on page 77)

Under the compulsion of these figures, we appointed a subcommittee of our system general safety committee to look into the use of rubber sleeves and to make recommendations. Our subcommittee gathered additional information from the 5 companies then known to have a mandatory sleeve rule, to determine, first of all, what kind of rubber glove rules were in effect and how generally they were using line hose and similar rubber goods on the pole. Their replies indicated that they were enforcing comparatively strict rubber glove and pole rubber practices; from which it would follow that their mandatory sleeve rule really meant pretty general use.

To be sure that we were not getting a run-around, a delegation from our subcommittee made a 2-day visit to 2 of these companies and watched several of their line crews at work. They were all using the full length or shoulder length rubber sleeves with rubber gloves. Their "rubbering up" of pole equipment was very thorough. Our visit was not known by the crews in advance. We talked with the men, asking in particular whether the sleeves were uncomfortable or hot in the summer. They admitted that they were hot, but said they were willing to put up with any discomfort because, by using them, they knew they were safe. We came back from this field inspection with the conviction that the use of shoulder length rubber sleeves was practical. The fact that these companies which we visited had used them 10 and 20 years, respectively, proved it.

Our subcommittee, therefore, recommended to our general safety committee that shoulder length rubber sleeves be worn on the same basis as rubber gloves. The general safety committee endorsed these recommendations. Our top management quickly agreed that the use of rubber sleeves was justified by the facts submitted, and approved such use on a mandatory basis wherever the idea could be sold to local management and union representatives. This was done last year in a number of our operating companies, with the result that this year about half

of our linemen are wearing rubber sleeves with rubber gloves on a mandatory basis. We have already experienced a marked decrease in electric shock and burn cases on our system this year, which I am convinced is due to the good start we have made in the use of rubber sleeves by our linemen.

Linemen's Insulated Hard Hats

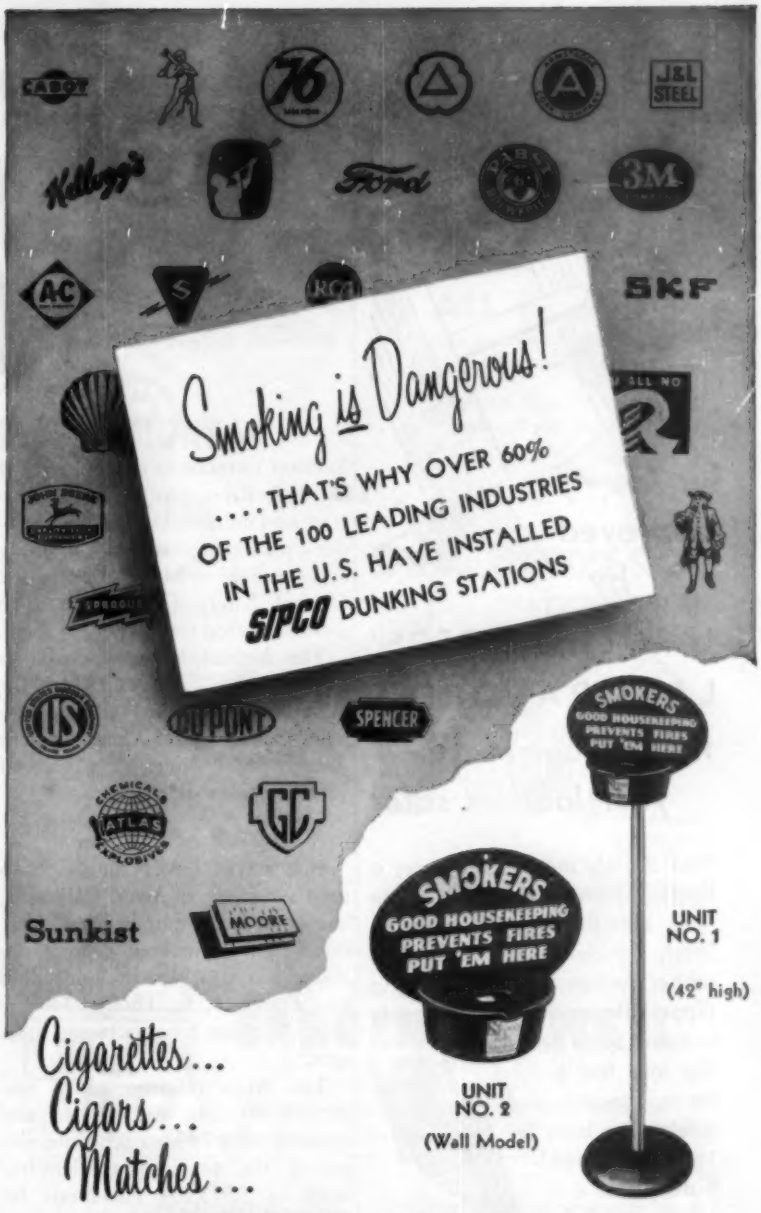
Just one more item of personal protection for linemen: insulated hard hats. The old standard lineman's head gear of 40 years ago, the derby hat, has, alas, disappeared from the scene. Even felt hats, whose crown and brim give some protection by warning the lineman before he pokes his head into a hot conductor, are getting scarce. Caps seem to be the favorite head covering nowadays, particularly among the young fellows; or else they want to go collegiate and wear nothing above the ears. Seriously, this is a real hazard.

The encouraging thing is the increasing acceptance of the insulated hard hats made of plastic insulating material for linemen and groundmen. They are available—can be obtained from several manufacturers—have high insulating and mechanical strength—and are probably the best answer to the problem of preventing head contacts or injuries, both to the men on the pole and on the ground. Many companies have adopted them for use by the members of their line crews, and pictures of crews wearing them are appearing with increasing frequency in trade publications. We're giving them a trial in several of our own system companies, some on a mandatory and some on a voluntary basis. I have the temerity to predict that before many years they will be considered a regular item of lineman's protective gear.

I strongly recommend that companies do all in their power to secure full use of these recognized and available protective devices by electric line workers.

From an address delivered at the 42nd National Safety Congress.

Pictures by courtesy of New England Power Service Company.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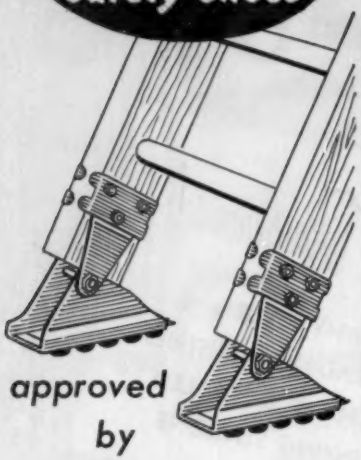
Pictures by courtesy of New England Power Service Company.

Dayton
safety shoes



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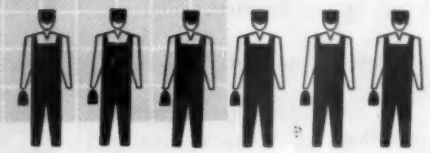

SEVERAL CATEGORIES of employees of the Salt River (Ariz.) Power District won industrial safety awards under a plan inaugurated by the utility and approved in March, 1954 by the Central Safety Committee. The awards granted cover the year 1953.

The highest Safety Award was won by the Cross Cut Machine Shop which coralled the Section Safety and No-Lost-Time Accident Awards by completing a year of 98,448 accident-free hours.

• • •

TIDE WATER ASSOCIATED OIL COMPANY'S refinery at Avon, California, has completed four million man-hours of work without a single disabling injury, it was announced in San Francisco, by Thomas O. Edwards, division manufacturing manager.

The Avon refinery, which employs 1450 men and women and operates on a 24-hour schedule, surpassed the previous accident-free mark of 3,973,204 man-hours for California oil refineries.

The present 17-month record which started on November 1, 1953, and is still continuing, has reached a total of 507 days.

• • •

FOR ESTABLISHING A SAFETY RECORD 89 percent better than the average for the entire plastics industry, Synthane Corporation, Oaks, Pa., has been awarded the National Safety Council's Award of Merit.

Statistics show the 1951–1953 average for the plastics industry to be an accident frequency rate of 8.6 with a .73 severity rate. Synthane's frequency rate for this same period was 4.0 with a .14 severity rate. An even more marked improvement was achieved during 1954 when Synthane's frequency rate dropped to 0.7 with a severity rate of only .01.

• • •

THE SCHEDULED AIRLINES OF THE United States set the best safety record in their 36 year history in 1954 as they transported an unprecedented 34,131,000 passengers. According to "Planes," official publication of Aircraft Industries Association, the scheduled airlines established a passenger fatality rate of just .08 per cent for every 100 million passenger miles flown. On April 18th Colonial Airlines, Inc., celebrated 25 years without a single fatality to passenger or crew.

• • •

PLANNED SAFETY AND A COOPERATIVE spirit on the part of the 360 employees of the two plants of Rollway Bearing Company, Syracuse, New York, has paid off in the completion of one full year of accident-free work. The safe year represents 650,822 man-hours worked.

Discussing the excellent safety record, Cecil C. Hilchie, company safety director cited the work of the foremen's committee which meets periodically with him to review the safety program and plan for continued safe work performance. Bulletin board safety promotion and a display which reports doctor cases

and lost time cases by department over a 5-year span help keep Rollway people up-to-the-minute on their safety life.

• • •

AVCO MANUFACTURING CORPORATION compiled the best safety record in its corporate history during 1954. Pace setter for the corporation was its American Kitchens Division in Connersville, Indiana, which had only one lost-time accident in 2,920,996 man-hours worked, for an average of .34 accidents per million man-hours.

Avco's overall average for the year was 3.35 lost-time accidents per million man-hours, against a national, all-manufacturing industry average of 11.5 lost-time accidents per million man-hours. All Avco divisions showed improved safety records in 1954 over 1953.

• • •

A WORLD'S RECORD IN SAFE OPERATIONS at a shell loading plant—more than five million man-hours without a lost-time accident—has been set by the employees of the Milan Arsenal in Milan, Tenn., during the past eleven months. Operated by The Procter & Gamble Defense Corporation, the Arsenal will receive the National Safety Council's award of honor and two top safety awards from The Procter & Gamble Company.

• • •

B. F. GOODRICH HAS AGAIN RECEIVED the National Safety Council's Award for accident prevention performance. The company's textile division, Martha Mills, Silvertown, Ga., also won an Award of Honor.

Winners in the National Safety Council rubber section safety contest included the company's plant in DuBois, Pa., for the eleventh time, the Research Center, Brecksville, Ohio, the Reclaim plant and the Works Technical laboratories in Akron, and the Port Neches plant of B. F. Goodrich Chemical Company.

Awards of Merit went to the B. F. Goodrich Akron plants as a group, to the footwear and flooring division, Watertown, Massachusetts, the Louisville, Kentucky, plant of B. F. Goodrich Chemical Company, and the Los Angeles plant of the Tire and Equipment Division.

• • •

THE DECATUR CASTING CO. HAS completed a full year of operation without a lost-time accident. The record represents a total of 109,360 man-hours and reflects the effectiveness of the company's "Safety and Hygiene Program."

A SAFETY RECORD UNPRECEDENTED in the construction industry—a full year without a lost-time injury—has been set by Du Pont Construction Division men at 34 heavy building sites in 15 states.

Working toward a planned and coordinated objective of 12 accident-free months, over 9,000 employees chalked up 7,000,000 exposure hours without a lost-time injury. Over 200 major injuries could have been expected during this period if the accident frequency rate had followed that of the construction industry as a whole.

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BE CAREFUL SAVE A LIFE IT MAY BE YOUR OWN
HELP KEEP THIS PLACE CLEAN
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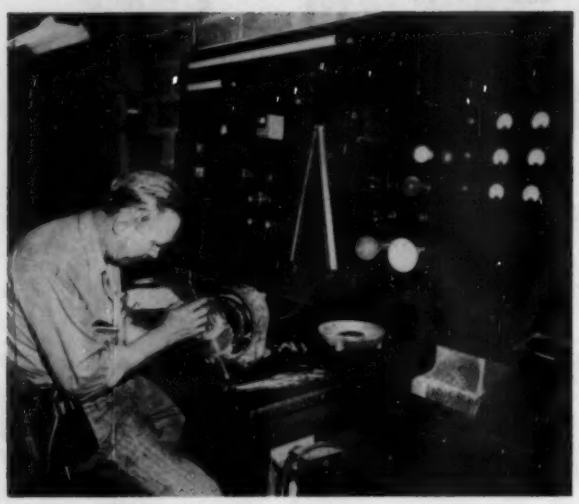
(For details, use Key # E-17 on card on page 77)

"Safety Maintenance" Salutes

A SAFETY IDEA



Electrical Maintenance Testing Board

To cut down on manhours and repair costs, an electrical engineer and consultant, Bernard Eichwald, has produced an ingenious solution to the peculiar problems involved in adequately testing various electrical machines for industrial and commercial use. Mr. Eichwald, whose firm, B. Eichwald & Co., Inc., is responsible for the electric operation and maintenance of the United Nations buildings, among other projects, devised with his engineers, a means for accurately testing hundreds of different types of electrical equipment in use at the United Nations.

Specifically, the solution is in the form of an electric 4 by 8 foot rectangular test panel which is used to make laboratory tests on motors, heaters, incandescent lamps, relays, cold cathode lamps, fluorescent lamps, fluorescent lamp starter buttons, motor starters, clocks, batteries, bells, fire detectors, thermostats, fuses and switches of all types.

To an uninitiated layman the panel looks something like a device used in science-fiction books by Martian scientists. But, according to Mr. Eichwald, this panel is not supernatural. In the past 3 years of its existence it has proven of immeasurable value both in manhours and dollars saved, since equipment can be checked, tested, repaired and returned to service in a fraction of the time and cost to send it out.

Technically, the source of energy for the panel is a 3-phase, 4-wire 120/220 volts set-up with autrastats in each phase.

What It Can Do

Here are some interesting features of this panel:

Voltages of 1 to 220 volts may be obtained from the line directly, adjustments being made with autrastats. Higher voltages of 500 to 5000 volts may be obtained from built-in transformers. Voltmeters and ammeters are built in each phase and provide an immediate check of any equipment on test. (One ammeter and one voltmeter may be switched out of the test board circuit via a D.P.D.T. switch for any job that requires an isolated meter.) D.C. voltages of 1 volt to 250 volts may be checked on a built-in meter multiplier.

Capacitors of 400 mmf. to 40 mf. may be measured directly on a built-in bridge. Sizes of capacitors required for single phase motors may be determined by a switch meter capacitor arrangement permitting capacitors of various sizes to be switched in or out of motor starter circuits.

A multiple series lamp arrangement is provided for testing lamps, fuses and providing a low or high current series circuit for probing motor windings, relays, heaters, etc.

A tapped transformer is provided to supply circuits of 2 and a half, 5, 6, 12 and 24 volts. This circuit is equipped with a bell and buzzer for probing low voltage winding and continuity checks.

One, 2 and 3-phase twist lock outlets and pin plug outlets are provided on the board and may be switched for series or across the line operation.

Test probes are of the banana plug-in type with specially built heavy duty receptacles which permit leads to be pulled out quickly.

The test board is energized with a magnetic switch operated by a specially designed foot treadle which keeps the foot only 1/16 of an inch from the floor leaving both hands free to work on the unit under test. The entire test board is dead whenever the foot is removed from the treadle, thereby eliminating the possibility of the operator walking off and leaving live wires or equipment.

A 4-color wiring diagram is painted directly on the test board permitting even a person with elementary electrical knowledge to trace wiring of the circuit in use.

According to Mr. Eichwald, this test panel was designed specially to meet the vast electrical requirements of the United Nations. However, he claims there is no reason why such a panel cannot be adapted to industrial use.

Picture by courtesy of B. Eichwald & Co.

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(For details, use Key # E-18 on card on page 77)

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A complete line of Self-Sticking Accident Prevention Signs in wordings and sizes recommended by ASA and NSA is now available from the W. H. Brady Co. Stocked in sizes 5"x14", 3¼"x14", 3½"x10", 5"x9", 2¼"x9" and 2¼"x4½". Stick to any surface. Are put up fast by unskilled help without nails, screws, tools. Write for 16-page Catalog No. 145-C and free usable samples.

Another Brady product, Self-Sticking Warning Stripes and Warning Checks in rolls, lets you mark any area fast with either diagonally striped designs or checkerboard designs. Applied right off the roll. Eliminate costly hand painting. Made of self-sticking vinyl plastic, acetate fibre and reflective "Bradylite." Stocked in 3 different color combinations in rolls of various widths and lengths. Write for Bulletin #143-A and free samples.

Manufacturer: W. H. BRADY CO.
749 W. Glendale Ave., Milwaukee 12, Wis.
(Use Key # E-19 on Inquiry Card on page 77)

Poison ivy, poison oak and sumac no longer need bother your men when they use MSco POISON IVY OINTMENT for prevention or cure. Remember, MSco is *headquarters for poison ivy first aid:* Unit A-20 Zircreme, 6 per unit; Zircreme (clinical) 1 lb. jars; Unit A-17 Poison Ivy Ointment, 6 per unit; Unit 102A Poison Ivy Wash, 4cc., 6 per unit; Unit 164A Poison Ivy Wash, 10cc., 3 per unit. See your MSco distributor, or write for illustrated poisonous plant identification guide.

MEDICAL SUPPLY COMPANY
Rockford, Ill., In Canada, it's Safety Supply Co.
(Use Key # E-20 on Inquiry Card on page 77)

"What's the Law?"

Edited by
HENRY M. GROSMAN
Counsellor at Law, Newark, N. J.

Master Superior Court, New Jersey
Member
American Bar Ass'n, New Jersey Bar Ass'n,
National Federation Insurance Counsel
Past Commander, American Legion, Post 10,
Newark, N. J.

• • •

PARTNERSHIP—Wife Sues for Compensation even though Husband is Partner in Firm

CAN A WIFE who is an employee of a partnership composed of her husband and another individual, recover workmen's compensation from the partnership for injuries arising out of and in the course of her employment?

The New Jersey Superior Court has held that, despite previous decisions which held that a husband could not sue and recover workmen's compensation benefits from his wife, who owned and operated a business in which he was employed, because there can be no contract of hire between spouses; the employer in the present case is a partnership and the State Compensation Act declares that employers include "natural persons, partnerships, and corporations." Employee is defined as synonymous with servant and includes all persons performing services for another for a consideration, with certain exceptions, and no exception is made as to a wife of a partner.

At common law a partnership had no existence apart from its members who had to be sued as individuals on partnership obligations. However, partnerships have come to be widely regarded as separate entities in the business world and the legislatures and courts have made inroads into the common law doctrine. An employee of a partnership cannot be said to be an employee of an individual member thereof, as each partner has authority to engage employees in the ordinary course of business and to bind the firm in so doing. Such employees are employees of the entity and not of the individuals who form it. This has also been recognized by our courts.

Accordingly, under the present state of the law, a partnership is a jural person with whom a contract of employment may be had under the Workmen's Compensation Act, and petitioner's employment was not with her husband individually. She is therefore entitled to compensation.

The above case is an excellent illustration of the courts' and legislatures' continuing practice of enlarging the scope of workmen's compensation as the years progress. As a rule, most jurisdictions and the common law prohibited spouses from instituting legal proceedings against each other for a negligent act. Most workmen's compensation statutes contain the same prohibition, which included New Jersey until this recent decision.

FELICE vs. FELICE, N. J. Superior Court (Appellate Division, March 24, 1955).

Accident Arose out of Employment

AN EMPLOYEE, WHO WAS injured when an automobile crashed into the rear of a car he was pushing and crushed him between the two, was awarded compensation on the grounds that the injuries were sustained in the course of his employment.

The worker and another employee had gone at the request of their employer to change two flat tires on a truck. In order to inflate the tires, they took them to a nearby filling station. The owner permitted them to use his air hose. While they were

inflating the tires a car stalled in the station and the station owner asked them to help push the car away from the gas pumps and onto the highway.

The accident occurred a short time after they had started to push the stalled automobile down the highway. The Court concluded that the accident arose out of and in the course of their employment.

The court held that the assistance extended by the filling station operator was for the benefit of their employer. The courtesy they extended in return should also be in the course of their employment.

The employees had not finished inflating the tires when their help was requested. They had reasonable grounds to believe that, if they did not help push the automobile, the station operator would refuse to let them use the air hose. The court said that the fact that they were receiving requested assistance from the filling station operator at the very time and place they were rendering requested assistance to the station operator distinguished this case from "Good Samaritan" cases.

GUEST vs. BRENNER IRON & METAL CO., No. Carolina Supreme Court, Feb. 4, 1955.

Aggravation of Dermatitis

A WORKER had a pre-existing fungus nail condition which was aggravated by subsequent continuous submersion in benzine while performing his work. He was awarded compensation by the court under the occupational disease sections of the New Jersey Compensation Statutes. The employer contested the award, on the basis that the medical proof did not indicate that benzine would cause a dermatitis condition by itself. He also claimed the worker's condition at the present time was a result of his prior condition, which combined with the benzine to give him the present disability.

The court dismissed this contention by saying that the worker, under the amended Occupation Disease Statute, was entitled to an award for the aggravation of his original condition, even though the benzine might not by itself be sufficient to give him dermatitis. It was enough that the benzine had aggravated his already present dermatitis.

This case, of course, illustrates the established rule that an employer hires an employee subject to all his infirmities at the time of the employment. The employer's responsibility under workmen's compensation laws is such that if an employee with pre-existing diseases or injuries has an accident which aggravates the pre-existing disease and infirmity, the employer becomes liable for the aggravation, even though the accident would not by itself have caused any disability to a healthy employee. The necessity of pre-employment physical examinations by employers becomes quite compelling because of this rule.

GIAMBATTISTA vs. EDISON, 32 N. J. Super. 103, Appellate Division, 1954.

Simpkins suffered from heat fatigue–and his work was extremely poor.

Now Morton Impregnated Salt Tablets help Simpkins work fast and sure.

You can hold down accidents caused by heat fatigue

Complies with Federal Specifications SS-S-31e for Type III, Class C Impregnated Salt Tablets

U. S. Patent No. 2,665,236
Patented 1954 (Canada) No. 501,316

Be sure you have plenty of Morton Yellow Impregnated Salt Tablets handy. Their controlled dissolving action gives *immediate* relief *without causing nausea.*

Essential body salt lost through perspiring is immediately replaced, but at a gradual rate. Your employees feel better, work better more safely, when they take Morton Yellow Impregnated Salt Tablets.

Morton Yellow Impregnated Salt Tablets come in a handy disposable dispenser. Plastic and heavy-duty aluminum dispensers are also available, as are plain salt tablets.

Place your order this week with your local safety equipment distributor. If he cannot supply you, write.

MORTON SALT COMPANY
Dept. SM-5, 120 S. LaSalle St., Chicago 3, Ill.

(For details, use Key # E-21 on card on page 77)

WHAT HAPPENS NEXT?

If management has been wise, a fire tragedy will be stopped before it starts...if not, in 20 minutes extensive destruction and total loss could readily be the result.

First-rate fire protection is essential to the continued success of any business. With C-O-TWO Smoke or Heat Fire Detecting Systems, plus C-O-TWO High Pressure or Low Pressure Carbon Dioxide Type Fire Extinguishing Systems, as well as PYRENE Air Foam Type Fire Extinguishing Systems for specific outdoor locations, your plant can have fast, positive round-the-clock fire watchman service simultaneously at each fire hazard point . . . a fire tragedy is stopped before it starts.

Furthermore, there is a personal sense of responsibility inherent with PYRENE—C-O-TWO Fire Protection Engineers that assures you of fully adequate firesafety . . . a definite plus in your behalf. Whether it's fire detecting or fire extinguishing . . . portables or built-in systems . . . PYRENE—C-O-TWO means top quality backed by experienced engineering that results in operating superiority for you at all times.

Act now . . . don't take unnecessary chances with your investment any longer . . . the extensive experience of PYRENE—C-O-TWO over the years is at your disposal without obligation. Remember . . . a plant-wide fire protection survey skillfully executed today could be the means for greater profits tomorrow.

PYRENE — C-O-TWO

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Sales and Service in the Principal Cities of United States and Canada

COMPLETE FIRE PROTECTION

portable fire extinguishers . . . built-in fire detecting and fire extinguishing systems

CARBON DIOXIDE • DRY CHEMICAL • VAPORIZING LIQUID • SODA-ACID • WATER • CHEMICAL FOAM • AIR FOAM

(For details, use Key # E-22 on card on page 77)

Standard Revisions

A COMPLETE REVISION of NFPA Standard No. 31 which outlines the safe installation requirements for all oil burning equipment from portable kerosene heaters to large manually operated industrial type burners, will be submitted for official adoption by the National Fire Protection Association at its Annual Meeting in Cincinnati on May 16–20.

In effect a new standard, the sweeping revisions of NFPA No. 31 as recommended should answer many of the problems for the safe use of oil burning equipment—particularly those of oil stoves tragically high-lighted in the past winter's news.

The NFPA Committee on Flammable Liquids has been at work on the new standard for over two and one-half years. The committee is made up of representatives of the oil industry, heating equipment manufacturers, fire departments and insurance interests from all sections of the United States and Canada.

Last revised in 1954, in part only, the new NFPA No. 31 treats such items as clearances to combustible construction, installation of fuel pipes, amount of air needed for proper combustion, draft requirements, tank installations including drums used for supply and storage, and construction and installation features for space heaters and cooking appliances.

It also contains an extensive list of definitions aimed at achieving a uniformity of terminology to clarify many of the misunderstandings now existing in the field both in the United States and Canada.

NFPA fire safety standards as approved by the general NFPA membership are purely advisory. However, they are widely used as the basis of state and municipal legislation and fire insurance requirements.

Several amendments to NFPA Standard No. 385, Tank Vehicles for Flammable Liquids, are also under consideration. This standard covers the safeguarding of normal petroleum products under normal conditions.

The standard was last revised in part in 1954 and the current amendments include: new specifications of aluminum alloys and appropriate welding processes for high strength welded construction of flammable liquid tank vehicles; also revision of the standard's section on protection against intermixing to prevent the possibility of gasoline being mixed with fuel oil.

A total of 12 recommended revisions in NFPA No. 58, Standards for the Storage and Handling of Liquefied Petroleum Gases, will be presented for official action at the annual meeting.

The revisions as proposed by the NFPA Committee on Gases will apply to odorization, use and storage of small ICC containers within buildings, specific permitted use of malleable or nodular iron for accessory equipment, and recognition of a tolerance upon setting of "maximum" start to discharge pressure of container devices.

Standard No. 58 has been adopted by most of the states, provinces and cities throughout the United States and Canada and by the National Board of Fire Underwriters. It was last revised in 1954.

The text of the current standard revisions are contained in the Advance Reports of the NFPA, available from its executive office, 60 Batterymarch St., Boston 10, Mass.

Metal Roof Survey

ROOFING MANUFACTURERS and companies were contacted in a survey recently by the Metal Roof Deck Technical Institute to determine what percentages of roof construction now in the planning stages are utilizing two-ply, one-ply or no vapor barrier build-ups.

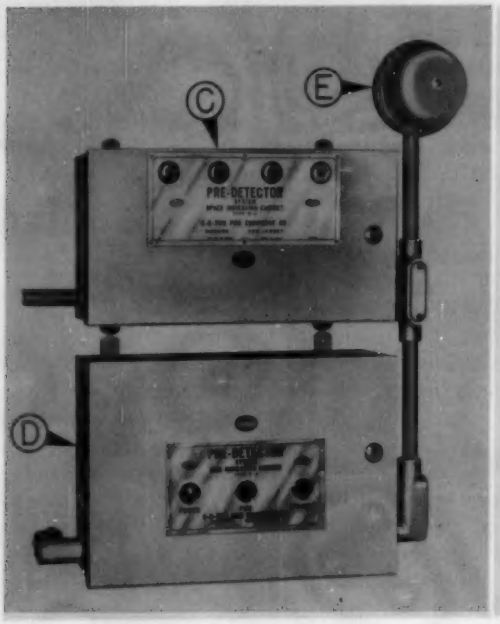
Results of the survey indicate that with rigid board-type insulations, two-ply vapor barrier build-ups constitute only 13.8 percent of metal roof deck construction and well over 50 percent of metal roof deck build-ups have either one ply or one mopping of pitch only.

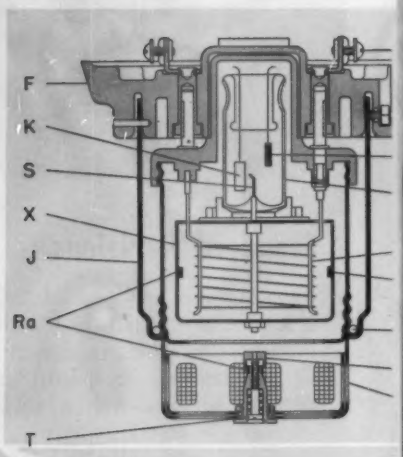
The two-ply vapor barrier consisting of two asphalt impregnated felts plus three moppings of pitch presents by far the greatest amount of combustible material between the non-combustible roof deck and the insulation.

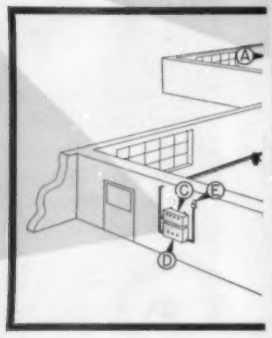
Although insurance companies have had favorable experience with non-combustible metal roof deck construction, MRDTI points out that the apparent trend toward the use of lesser amounts of pitch plus the increased development of non-combustible vapor seal will add further assurance to safe metal roof deck construction.

Quick - Sniff Detector

Electrical conduit and space indicating cabinet (C); fire indicating cabinet (D), and alarm bell (E) are supporting components of detectors. They work together to give visual and audible alarms for fire.







NUCLEAR ENERGY has entered the fire protection field. A radioactive element plays an important part in a revolutionary method of detecting fire in its earliest stages, and, although the new type of detector is sensitive to smoke, its actuation does not have to depend on either visible smoke, flame or heat.

The first evidence of most fires is generally the release of combustion gases. Then visible smoke appears, and finally flame and heat. In the past, fire detecting devices have been actuated by the relatively late manifestations of the fire: its heat (either fixed temperature or rate-of-rise thermostats), its flame (photo-electric), or its smoke (photo-electric). The new detector, however, carries fire detection a step earlier and reacts to the combustion gases as well as the later products of either smoldering or open fires.

The heart of the system is an overhead detection device electrically connected to a fire indicating cabinet. The idea for this detector unit is based on earlier European research on the ionization chamber principle of fire detection. Each detector-head contains a highly sensitive gas discharge (cold cathode) tube plus two independent ionization chambers, one of which is exposed to the atmosphere and the other closed to the atmosphere. In each of these chambers there is mounted a minute source of radioactive material, gold foil containing radium whose half-life is over 1,500 years. The alpha radiations ionize the air making it electrically conductive.

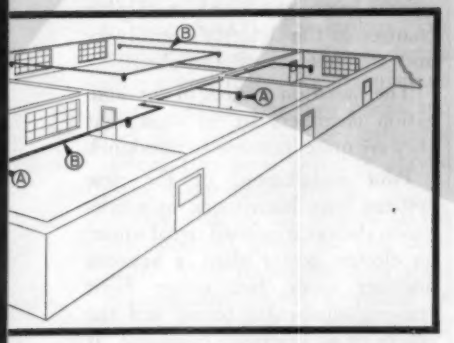
Each chamber is adjusted to give equal voltage under normal circumstances. However, when combustion gases or smoke are present, the balanced condition of the two ionization chambers ceases to exist. When the combustion products, either visible smoke or invisible gases, enter the exposed chamber, they decrease the electric current not only by absorbing some of the alpha rays but also, since their ions and electrons are much heavier than those of air, they recombine into neutral molecules which increase the resistance of the outer chamber.

When the two ionization chambers are no longer in

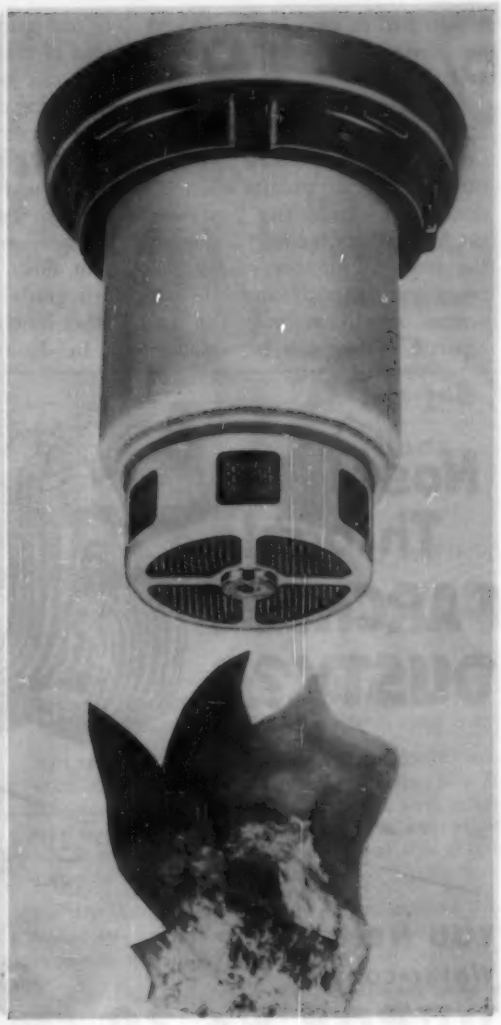
Scents . . .

Left-Detector cross-section:

O—chamber exposed to air
X—virtually-sealed chamber
Ra—radio-active material
SA—sensitivity adjustment cap
T—sensitivity adjustment screw
G—gas-discharge tube
A—anode
K—cathode
S—starter electrode
W—wire-grid electrode
J—locking shell
V—O ring
F—socket base
L—locking set screw
Y—terminal screws



Typical installation shows detector heads (A); connected by separate circuits (B) to space-indicating cabinet (C) and fire indicating cabinet (D) and alarm bell (E) to give warning.



first Whiff of Fire

balance, they cause the specially designed gas-discharge tube to become electrically conductive. This tube, in turn, operates electrical relays for either visible or audible alarm signals at a fire-indicating cabinet. This cabinet also has a supervisory trouble buzzer and light to indicate whether or not the equipment is in working order.

Not only does this detector discover fire more quickly, but a single detector head can protect a larger area. Under ideal conditions and with smooth ceilings, a single head is sensitive enough to guard up to 3,600 square feet of area. The unit is designed to be attached to a standard four-inch round electrical conduit box and as many heads as necessary for the space requirements can be connected in a single two-wire circuit to the fire indicating cabinet. The heads are spaced 60 feet apart and up to 30 feet from side walls. Each one can be

adjusted to its own sensitivity without affecting the others in the circuit.

In this pre-detector system developed by Pyrene—C-O-Two, a space indicating cabinet can be connected through separate circuits when it is desirable to know the location of the fire, with each circuit containing the required number of heads to cover the specified area. In this system set-up, as many as four separate circuits can be connected to one space indicating cabinet and four of these space indicating cabinets can be connected to the fire indicating cabinet, making a total of 16 separate circuits or spaces being handled by one system. The space indicating cabinet shows visually by number the area affected and it contains relay contacts which will shut down ventilation, operate an extinguishing system or perform other functions in the affected area.

In demonstrations of the new system, the response of the pre-detector head proved to be much quicker than that of other types of fire detecting devices. In one test, the new detector, a smoke detecting system, and a fixed temperature thermostat were installed in a fire-test building. A fire was started in a waste basket underneath a desk. The pre-detector head sounded an alarm in 17 seconds. The smoke detecting system required well over a minute; and the fixed temperature heat detector over three minutes.

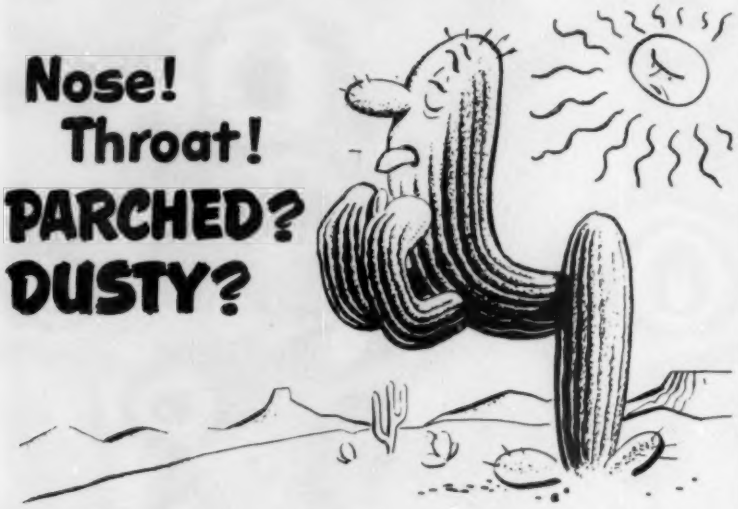
The pre-detecting system has been thoroughly tested by Underwriters' Laboratories, Inc. and has received their approval. Its response to fire, either of a slow smoldering nature or a fast free-burning nature, is unusually rapid. Furthermore, low temperature or humidity have no effect on its operation, and heavy atmospheres containing dust, soot or cigarette smoke accumulated over several hours cause only negligible changes in the detector's sensitivity and will not set off the alarm.

The radiation sources in the ionization chambers are so weak that they are quite harmless to personnel.

Pilot installations of the new systems have been made in a television station, a railroad signal tower, an electric power plant, a network analyzer room, two airline flight training equipment rooms and the offices of an insurance company. It is believed that this newest means of detecting fire will be suitable for practically any indoor location. Some of the suggested specialized uses include: merchandise warehouses, fur storage vaults, all kinds of electrical equipment, air conditioning equipment, aircraft hangars, racing stables, libraries, factories and homes.

With quicker methods of fire detection, industry and fire protection engineers can look forward to a reduction in mammoth fire losses, for the real answer to fires is discovering them early before they have a chance to become raging infernos and before large quantities of extinguishing agents are required to put them out.

Pictures by courtesy of Pyrene—C-O-Two.



YOU NEED . . .
Water-cooled
DUPOR No. 20

Double sponge filters, saturated with water before wearing, provide cool breathing even under hot, dusty or smoky conditions. Paint shops, foundries, steel mills, chemical labs, oil refineries, etc. have used and recommended this respirator for years. Regardless the industrial dust or fume hazard, here is an individualized air-conditioning unit that makes breathing safe for every worker. Get details! Sample sent $2.50 postpaid.

H. S. COVER, SOUTH BEND, IND.

"Respirators for Industry since 1894"

(For details, use Key # E-23 on card on page 77)

February Fire Losses Up

ESTIMATED FIRE losses in the United States during February amounted to $85,046,000, the National Board of Fire Underwriters has reported. This loss represents an increase of 7.8 percent from losses of $78,928,000 reported for February, 1954, and an increase of 13 percent from losses of $75,265,000 for last January (1955). These estimated insured losses include an allowance for uninsured and unreported losses.

Eye Program
(From page 16)

to our visual standard. I have in my file some very funny statements from professional eye specialists regarding an employee's vision. Some of these are very technical and require a highly trained specialist to understand the terminology. We have never made it a policy to dictate professional fees. We manufacture goods and set our own prices and feel that in this free enterprise system the same privilege should apply to our doctor friends.

Now what do the referrals to the eye specialist mean for our company? Most employees show some improvement. Over a period of years we find that 65 to 90 percent of the employees show improvement depending upon the department and the specific job classification. In the hosiery plant we had an immediate production gain from our referrals. In an important department such as the knitting department, we averaged 15 percent following referral. On an individual basis, it is almost impossible to ascertain the real value of the program. We have had as much as a 41 percent gain in productivity and earnings following a visit to an eye specialist.

For Example . . .

A few years ago we had an employee with 25 years of service in the hosiery plant referred to the eye specialist of her choice. Under our disciplinary procedure which we adhered to almost to the letter of the law, (it is customary to have standard procedures in dealing with unions) we found her production and quality so low that we were almost forced to discharge her or change her job. Upon her referral to an eye specialist, he found she needed glasses and prescribed them. The new glasses were so effective that the following week she had a 30 percent increase in production. Here is a concrete example in which the company was able to rehabilitate an employee with many years of service. We not only saved a valuable employee with a lot of skill and know-how but in addition we saved the cost of training her in another department. We saved training costs for the employee that would have replaced her. The costs of an overall industrial vision program is negligible in comparison to

A MUST

in every factory wash room and on-the-job locations

VI-LAN CLEAN powered with

ACTAMER* for Dermatitis Control

For easy filling of dispensers VI-LAN CLEAN is furnished in polyethylene bags thru which you may squeeze all or as much as is needed into the dispenser without waste. The bag may also be used as a portable dispenser on trucks and outside jobs. VI-LAN CLEAN also is available in convenient pint, quart and gallon containers for home and shop use. Write NOW for descriptive folder.

- **ACTAMER*** is a new bacteriostat of superior effectiveness, and tests have shown that VI-LAN CLEAN with ACTAMER reduces resident skin bacteria by as much as 97%.
- VI-LAN CLEAN does what soap can not do. It cleanses while it guards hands, face and body against skin contaminations. It removes greases, oils, paints, acids, printing inks, asphalt, rubber and gasket cements. It is non- irritating. It contains lanolin to restore normal skin qualities. It may be used with or without water.
- For safety sake, for cleanliness, to prevent lost man hours, absenteeism and expensive compensation claims, give your employees the protection of VI-LAN CLEAN.
- Place VI-LAN CLEAN dispensers in all wash rooms and in critical on-the-job locations, to economize and to speed your employees wash-ups.

DAMERON enterprises, inc.
427 So. 20th Street
Louisville 3, Kentucky

(For details, use Key # E-24 on card on page 77)

what it saves in training costs, lost time, turnover, absenteeism, etc. Our experience has shown that the cost per year averages about one dollar per employee. This includes cost of the instrument, refraction costs, supplies, labor costs, and clerical employees to maintain records etc. It does not include the cost of safety eye wear. In regards to this matter we have worked out a very reasonable mutually satisfactory deal with one of our eye specialists whereby he supplies us the eye wear at cost plus refraction fee.

We routinely retest employees every year. We are happy to retest an employee at any time, at the request of the employees or their supervisors. Our supervisors make these referrals during the course of the year as they have found it invariably true that poor production and poor quality workers need professional eye attention.

A word of caution is needed here about the timing of the installation of any human relations program. We have found from experience that it is almost impossible to install any human relations program effectively during times of negotiations. During negotiation periods employees are very itchy and feel that any company move has an ulterior motive behind it. Where employees normally volunteer for testing, it is difficult to obtain the same voluntary cooperation during these times. For some reason or another the unions feel that management will use test results to get rid of sub-standard employees and use it as a wedge for wage negotiations, etc. In one plant we had a vision program in effect for 7 years and had excellent cooperation with the employees. Somehow the rumor started that we were going to tie eligibility and promotion for better jobs with our vision standards. We had very few volunteers during this period.

What results should we expect from an industrial vision program?

1. Increased efficiency.
2. Rehabilitation of currently employed personnel.
3. Quality production increase and bad work decrease.
4. More regular attendance.
5. Less turnover. Employees who are "eyefully" unable to do the job often tend to quit.
6. Clinic visitation reduction.
7. Discovery of those people who not only have visual problems but have physical disturbances such as goiter, tonsils, etc.
8. Selection of those employees who are less accident prone.
9. Better employees selected for specific jobs.
10. Considerable reduction in training costs and training time.
11. A more ready acceptance of safety eye wear.
12. Stimulated personnel activities.
13. Turning down on a scientific basis unfavorable applicants, who feel that they have been given fair and equitable consideration.
14. More reliable employees selected.
15. Proper selection techniques to place employees returning from service.
16. Better human relations within the plant.

POSITIVE PROOF!

New, Patented* Rescue Suit Protects Wearer in 2500° radiant heat... permitting complete freedom of action and providing extra safety.

FYRE-ARMOR

- Reflects more than 95% of all radiant heat.
- Body temperatures remain NORMAL under Fyre-Armor.
- Light-weight Fyre-Armor protection offers complete mobility.
- Developed after years of research.
- Amazing record of successful use by municipal and military fire fighting departments and airport crash stations.

Now available here for the first time, after years of exhaustive research. Light-weight, absolutely flexible, FYRE-ARMOR Rescue Suits weigh no more than an ordinary suit or coat.

Unusually fine fire-resistant fabrics are fused by a patented process to metallic layers and then topped by specially treated durable aluminum foil which provides a higher heat reflectivity than any other process of aluminization. Special copper coated heat resistant safety goggles and visors offer full 180° visibility to round out the versatility of amazing FYRE-ARMOR.

Other models include a Fire Proximity suit for use by Fire fighters who work in the immediate vicinity of flame only and are subjected to high heat radiation; the FYRE-ARMOR FM Hood and special equipment for firemen who do not require a complete protective garment. Industrial suits and a full line of industrial apparel including face shields, vests, aprons, gloves and legging-spats for workers who are exposed to high heat and flame. FYRE-ARMOR special equipment includes drop curtains, tarpaulins and blankets to shield inflammable materials and for rescue work.

* Patented in Europe Pat. Pend. USA

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75 West Street, New York 6, N. Y.
WHitehall 3-5296

At no cost FYRE-ARMOR safety engineers will survey your requirements. *Write, wire or phone today* for full information.

(For details, use Key # E-25 on card on page 77)

17. Some union agreements call for promotions and transfers on the basis of seniority and qualifications. Many arbitrators have upheld that testing as an aid to determining qualifications is a sound management technique. It is much easier for a company to explain its position to an arbitrator armed with scientific data rather than arm chair opinion. Most arbitrators recognize management's right to establish qualification standards which may include psychological testing, physical examinations, and visual standards.

A complete selling program for industrial vision includes more than purchasing the instrument and installing a proper operating procedure. There are many other visual problems that may be added to the program from time to time. The use of a tachistoscope is a useful training and screening aid. It determines those people that can see quicker than others. From the safety factor it is reasonable to assume in certain job operations that there will be fewer accidents if employees can see more quickly than others. At the same time those employees in some operations who can see more quickly than others can produce more and inspect more. Recently we found that every employee in one department who could see 5 digits at a 25th of a second were all rated good, while those employees that could not see 5 digits at the same speed were all rated poor.

It is vitally necessary to follow up on the program from year to year. To have a virile vision program depends upon the initiative, ingenuity and constant vigilance you give it to keep it alive.

From an address delivered at the 41st National Safety Congress.
Picture and charts by courtesy of Bausch & Lomb.

THOSE IN THE KNOW
. . . PREFER
Install K-LENS-M Lens Cleaning and Anti-Fogging Stations for clean, clear vision . . . for all types of safety eyewear, glass or plastic.
More Efficient—Lower Cost
Send company letterhead for FREE sample and complete information.
K-LENS-M
REG. U.S. PAT. OFF.
The Acknowledged Leader in the Lens Cleaning Field
The WILKINS Co., Inc.
Cortland 2, N. Y.
(For details, use Key # E-26 on card on page 77)

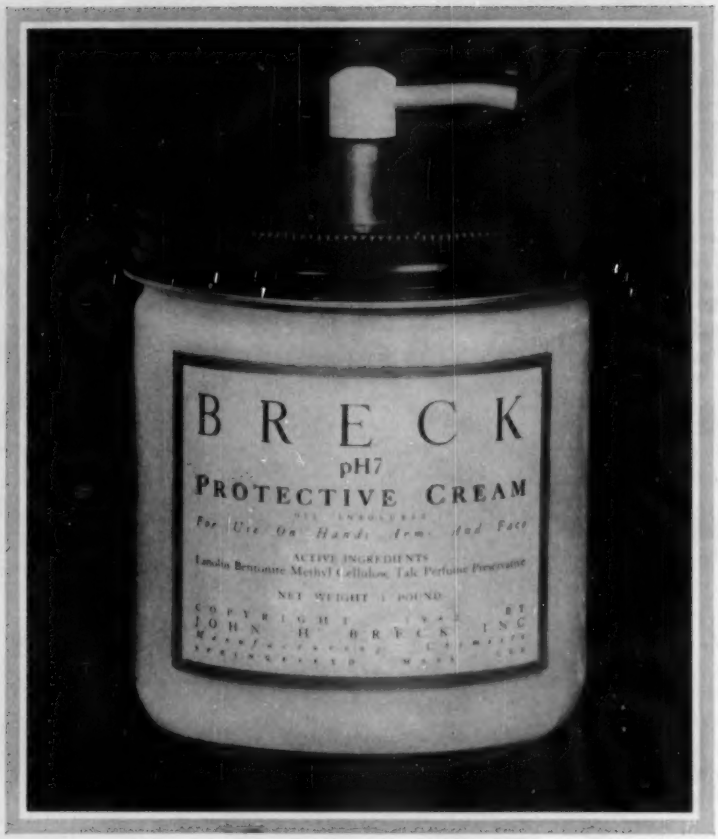
Welding Conference

A WELDING CONFERENCE, the first to be held on a national level, has been added as another feature of the National Spring Meeting of the American Welding Society and the concurrent Welding Show to be held at Kansas City, Mo., June 7 to 10.

The addition of the conference brings the total number of major events planned for the four-day meeting up to eight. Advance registrations indicate that attendance will be the greatest in the 36 year history of the society.

The welding conference will feature case histories and informal, panel discussions. It will be held in addition to the technical sessions of the Spring Meeting, where formal papers are read. The schedule for the conference includes a practical welding clinic, welding of plastics, and automation in the welding industry.

The exhibits and the conference will be staged at the Kansas City Auditorium, other events at the Hotel Muehlebach. Hotel arrangements may be made by addressing the American Welding Society, 33 W. 39th St., New York 18, N. Y.



B R E C K

p H 7 P R O T E C T I V E C R E A M

Breck pH7 Protective Cream covers the skin with an invisible, oil-resistant film which is neither slippery nor sticky. This neutral film prevents contact of irritants with the skin. Breck pH7 Protective Cream is effective against such irritants as lubricating oils, grease, aromatic and hydrocarbon solvents, cutting compounds, synthetic resins, rubber dust, fiber glass, paint, duplicating inks and iron dust. Breck pH7 Protective Cream is easily removed with Breck Hand Cleaner or with soap and water, making the use of harsh cleansers unnecessary.

A Breck Industrial Preparations Booklet will be forwarded to you upon request.

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NEW YORK · CHICAGO · SAN FRANCISCO · OTTAWA CANADA

(For details, use Key # E-27 on card on page 77)

Handling Radium

THE SERIOUSNESS of recent personal injuries and the size of property damage claims resulting from accidents with radium-filled capsules being used in commercial and laboratory work is the basis for a special bulletin issued by the Special Hazards Committee of the Association of Casualty and Surety Companies' accident prevention department.

Listing two theft cases where amputation of the injured man's hand or leg was necessary and several where severe property damage resulted, the bulletin outlines the following steps which should be taken to safeguard against further mishaps with the powdered radium most commonly used in medicine and industry:

1. Personnel assigned to handle the tiny capsules should be advised of the dangers involved and the necessity for great care in their use.

2. The use and storage of containers should be under effective supervision so that the location of all containers is known at all times. It is preferable that capsules be kept under lock and key when not in use and that a constant inventory be maintained.

3. Equipment used to handle the capsules, especially mechanical equipment, should be designed so that the containers are not subjected to shocks and jarring movement.

4. Measuring equipment should be available for detecting unusual radiation conditions such as those resulting when a container is lost or broken. Meters that respond only to beta and gamma radiation are unsatisfactory and may give false readings of the amount of radiation present. Alpha meters, while more difficult to calibrate, give a truer picture.

5. Containers of all types, i.e., glass or very thin metal such as platinum or aluminum, should be checked regularly to eliminate the possibility of undetected leakage.

6. Personnel should be instructed in proper procedures to follow in case a capsule is broken so that contamination will not be spread.

7. Personnel should know whom to contact in the event of loss or breakage of a container.

The bulletin, issued by the Special Hazards Committee of the Association of Casualty & Surety Companies, also lists five basic rules to be followed if a radium emergency should arise:

1. Do not attempt to clean up the spill.

2. Close all windows, stop ventilating equipment and leave the room immediately.

3. Remain in the close vicinity of the exit until a radioactivity check can be made of shoes, hands, clothing and equipment. The check will prevent spreading of the contamination.

4. Lock all doors and seal all cracks, from the outside of the room, if powdered or gaseous sources of radiation are involved.

5. Contact a consultant experienced in radiation hazards. Decontamination of persons, buildings and equipment should be conducted only under qualified supervision.

While radium is being replaced for many uses by radioactive cobalt and other new radioisotopes, the safety rules listed apply to those materials also.

Lost or Stolen

Principal cause of concern among radium users is that a capsule will be lost or stolen. Since the material is so valuable and the container so small—often less than an inch in length and a sixteenth of an inch in diameter—it offers great temptation to thieves. The usual result of such theft is severe injury to the thief, frequently after only very brief exposure.

In cases of loss or misplacement, the bulletin says, the capsule is most frequently found either in the same room where the loss occurred or in a trash pile, incinerator or sewer. The radium is often found if a search is started immediately after the loss is discovered and is directed by an experienced radiation man.

Job Placement Service for Industrially Injured

A SPECIALIZED PLACEMENT service for compensation claimants has been added to the rehabilitation activities for the industrially injured at the Institute for the Crippled and Disabled, 400 First Avenue, in New York City. The new service provides carriers and claimants with specialized job placement either as part of a comprehensive rehabilitation program or as a separate service.

According to Mr. Willis C. Gorthy, Institute Director, compensation insurance companies may refer claimants for job placement alone or have it included as part of medical, psycho-social and vocational programs. Mr. Gorthy said that the new service was established in response to requests from among the more than 100 compensation carriers now referring cases to the Institute. The job placement contacts developed by the Institute on behalf of its other patients will be utilized as part of the new effort.

A new position on the Institute's staff, "Compensation Claimant Placement Officer," has been created. It will be filled by Mr. Charles E. Callan, whose background and experience is in the job placement of the disabled, particularly those who are the victims of industrial accidents.

The new placement service for the industrially injured is one of many specialized activities which the Institute provides to compensation carriers and claimants. In addition to comprehensive rehabilitation programs, the Institute also provides Preliminary Rehabilitation Survey facilities to help carriers determine the feasibility and extent of rehabilitation for specific claimants. Miss Arpie E. Shelton is the Coordinator of all compensation insurance activities at the Institute.

N. Y. State Radiation Code

PROVISIONS OF projected regulations of the State Labor Department to protect New York State workers against dangers stemming from industrial use of atomic isotopes and other radiation have been announced by Admiral William S. Maxwell, chairman of the Board of Standards and Appeals. Industrial Commissioner Isador Lubin has estimated that 150,000 workers are employed in jobs where radiation hazards exist.

"These regulations, which will have the force and effect of the law once they are adopted by the Board of Standards and Appeals, will also enable the Labor Department to cope with the special challenge of the atomic age to worker safety in the expanding future," said Commissioner Lubin.

"The proposed regulations cover everything from shoe store fluoroscopes to isotopes used in industry. They will include uranium mines if any are developed in New York."

Radioactive materials are used in industry today mainly in printing plants, dial-painting, shoe stores, veterinary hospitals, plants where industrial x-ray equipment is used as an inspecting device, during the handling of radium, and by research organizations.

Significant provisions of the draft made public by Admiral Maxwell include:

(1) Balancing the amount of protection required against the degree of hazard, by setting up adequate standards but avoiding inflexible details that could either fail to cover new conditions or hamper future development. Radiation sources will be classified by type of equipment, and by areas of degree of hazard in applying these standards.

(2) Special regulations, for shielding by lead or otherwise; for safe exhaust ventilation systems where loose radioactive materials are used; and for control of personnel contamination.

(3) Setting up definite permissible weekly dose limits of radiation. An alternative quarter-year plan of permissible limits is also offered.

(4) Registration of practically all installations that come under the labor law in New York State where radiation sources are manufactured, stored or utilized. Certain prescribed installations with minimum hazards are exempt from this rule.

(5) Emphasis on education of workers and qualifications of supervisory personnel in an attempt to control exposure to radiation. Workers will be required to wear film badges where needed.

(6) Requirement of protection surveys by employers on every installation in the State in order to give the Labor Department access to complete information on every potential radiation hazard. The initial survey must take place within one month after registration.

(7) Keeping complete radiation records of individual workers in the plant.

(8) Labelling of equipment with prescribed warning symbols and signs.

(9) A section on portable sources of radiation.

The proposed code is the result of efforts by a twenty-six man advisory committee composed of representatives of management, labor, the medical profession and State agencies, which started work in March 1953. After the Committee's report was sent to the Industrial Commissioner for approval, he submitted the proposals to the Board of Standards and Appeals.

After review by the board, public hearings are held, as required by law, in the principal cities of the State, giving all interested parties an opportunity to discuss them. When finally approved by the Board, the rules have the force and effect of law. Copies of the draft can be obtained by writing to the Board of Standards and Appeals, 11 North Pearl Street, Albany.

A man's worth his

THE PROBLEM OF HEAT FATIGUE is not a new one. The Bible mentions the symptoms of heat cramps in the eighth chapter of Jonah. Campaign records of Frederick the Great indicate his soldiers suffered from the same symptoms. Gold miners in the Rocky Mountains of our western states were no exception.

During the past fifty years, with the great industrial expansion that has taken place, more and more men have been employed on "hot jobs"; i.e., steel mills, blast furnaces, factories, foundries, mines, etc. With this expansion, the problem of heat fatigue, its causes, and its cures became more pressing.

Checking Up . . .

Medical science began checking. They looked into these symptoms which began with extreme lassitude and a loss of will to work in the early stages and progressed to a point where the effort to work became more and more forced; severe dizziness occurred and was followed by muscular spasms and sharp pains.

In 1925 Colonel R. J. W. Oswald, Chief Medical Officer of a gas company in Britain, wrote a letter to *The Lancet*, a medical publication there. He told of the abdominal cramp and exhaustion experienced by employees in retort work at the gas company. The problem became so serious that he introduced a "saline drink" for the stokers. The colonel had realized that loss of salt from the body during periods of excessive perspiration might well be the cause.

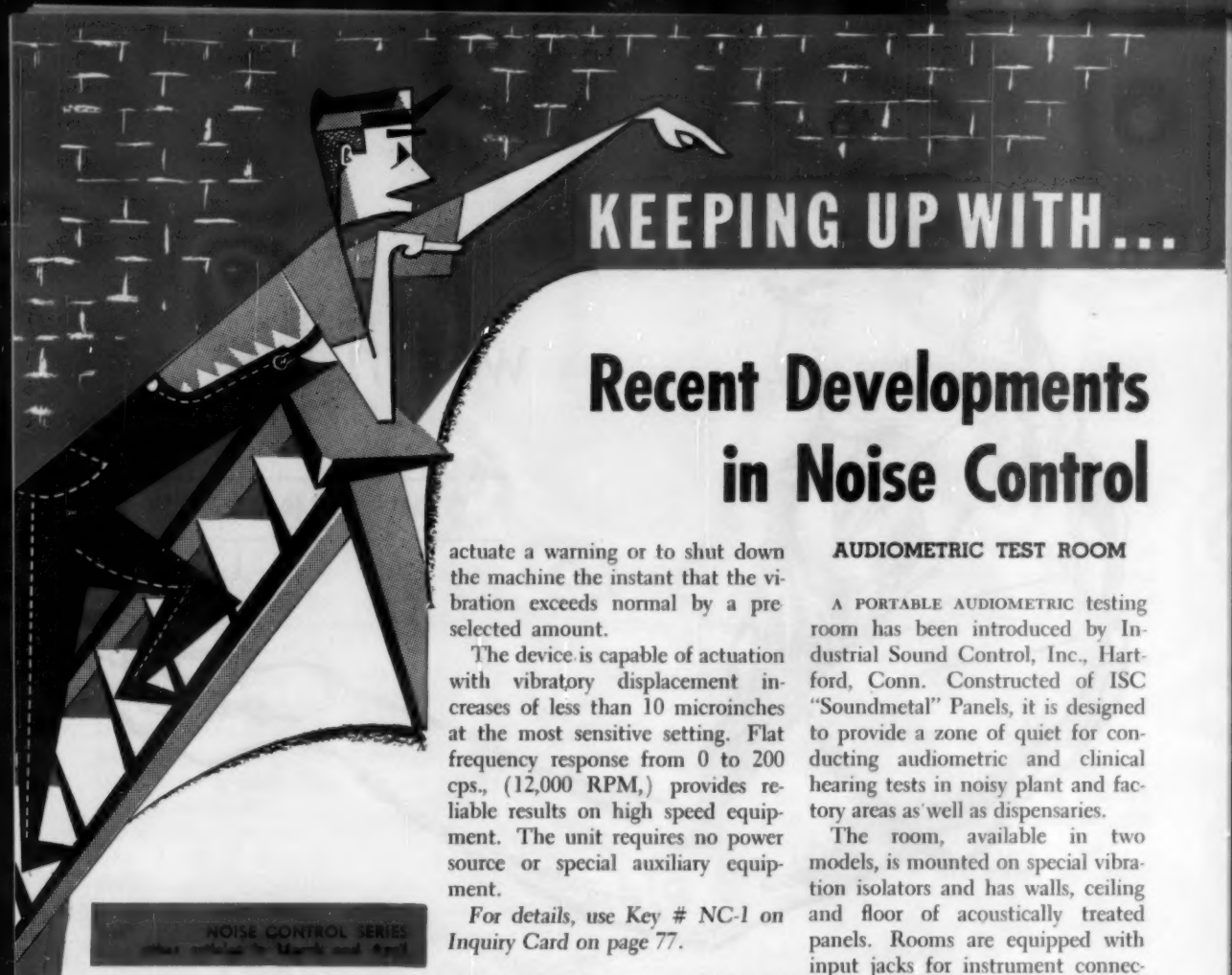
Colonel Oswald summarized the results as follows: "Since the drink has been introduced, cramps have been eliminated and a great sense of well-being at the end of each shift has been obtained. Incidentally, the sick rate has been reduced. . . ."

In this country the Youngstown Sheet and Tube Company cooperated with other organizations in bringing a group of specialists from Harvard University to Youngstown, Ohio in 1934 to study its heat cases.

The work showed that adding a teaspoon of salt to a gallon of drinking water was enough to keep the body salt at the necessary level. Salt also made it possible for the body to hold the required amount of water. The men who drank plain water weighed, at the end of the experiment, an average of 5.6 pounds lighter than when they started work.

Those who drank water with the salt added lost, on an average, a little more than a pound. This proved that salt lost in sweating made it impossible for the body

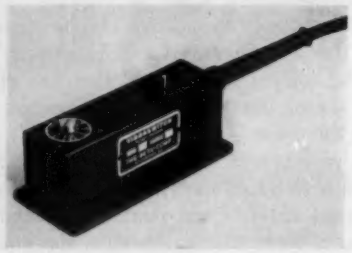
(Continued on page 60)



KEEPING UP WITH...

Recent Developments in Noise Control

NOISE CONTROL SERIES



AUTOMATIC VIBRATION SWITCH

THE "MODEL 1 VIBRASWITCH" is used for vibration measurement or as a protective device permanently installed on any rotating or vibrating machine. Made by The Beta Corporation, it serves to prevent costly damage or material wastage from malfunctions either causing or resulting from excess vibration. An internal SPDT snap switch may be wired into control circuits carrying up to 5 amperes to actuate a warning or to shut down the machine the instant that the vibration exceeds normal by a pre selected amount.

The device is capable of actuation with vibratory displacement increases of less than 10 microinches at the most sensitive setting. Flat frequency response from 0 to 200 cps., (12,000 RPM,) provides reliable results on high speed equipment. The unit requires no power source or special auxiliary equipment.

For details, use Key # NC-1 on Inquiry Card on page 77.

ACOUSTICAL FORMBOARD FOR POURED ROOFS

A PERFORATED extra strong wood-fiber acoustical formboard for use in connection with poured-in-place gypsum roof decks is announced by Elof Hansson, Inc. The resulting ceiling surface combines sound absorption with thermal insulation and is a permanent, rigid and finished base of the gypsum concrete roof deck.

The formboard is treated against mildew and termites and is designed to permit proper curing of the monolithic roof structure. The standard size is 32 by 48 inches, with approximately 230 holes per square foot, and is painted white. It is designed for use with standard sub-purlins spaced at about 32⅝ inches on centers.

For details, use Key # NC-2 on Inquiry Card on page 77.

AUDIOMETRIC TEST ROOM

A PORTABLE AUDIOMETRIC testing room has been introduced by Industrial Sound Control, Inc., Hartford, Conn. Constructed of ISC "Soundmetal" Panels, it is designed to provide a zone of quiet for conducting audiometric and clinical hearing tests in noisy plant and factory areas as well as dispensaries.

The room, available in two models, is mounted on special vibration isolators and has walls, ceiling and floor of acoustically treated panels. Rooms are equipped with input jacks for instrument connection, 110 AC outlet plug and an external instrument shelf. Fluorescent lighting is utilized to maintain coolness. "Soundframe" window and ISC "Soundproof" door protect against noise leakage. A two-way intercom system is available at additional cost.

Each model room has outside

dimensions of 6'10" in height; 5'7" in width; and 5'7" in depth. Model 100 room has purged air ventilation during the time door is open; model 101 has continuous ventilation utilizing ISC Air-coustat sound trap.

For details, use Key # NC-3 on Inquiry Card on page 77.

EAR MUFFLERS

TWO NEW ANSWERS to high-level noise have been introduced by Mine Safety Appliances Co. The MSA Earsaver (shown at left) is designed for workers exposed continuously to high-intensity noise, and the MSA Noisefoe (shown at right) for men who must enter and leave noisy areas frequently.

Both devices utilize an over-the-ear cushion formed from a soft, spongy material to soak up large-amplitude noise waves and keep them from reaching the ear. The cushions were designed on the basis of extensive anthropological studies by the United States Air Force's Aero Medical Laboratory and attenuation studies by Mine Safety's own research staff. They are said to fit every ear comfortably and provide for an effective acoustic seal with the wearer's face.

The MSA Earsaver is a baseball-type, peaked cap which holds two ear cushions in position over the wearer's ears. Made of cotton gabardine, it has a wide cape of two-way stretch elastic material which extends around the back of the neck and over both ears. This presses the cushions against the face to assure a comfortable, effective seal. The cap is available in three sizes and each is equipped with an adjusting strap at the back of the cap to meet individual requirements.

Supervisors, engineers, inspectors, and other workers who must move

ATHLETE'S FOOT?

Don't Take Chances!

ALTA-CO

KILLS FUNGI IN LESS THAN A MINUTE!

Low-Cost ALTA-CO POWDER *stops* Athlete's Foot *before it starts.* Independent laboratory tests prove ALTA-CO kills *all* forms of fungi commonly found in Athlete's Foot *in less than 60 seconds!* Harmless to skin, towels, clothing.

Foot baths in which ALTA-CO is dissolved can quickly, easily be tested for strength.* DOLGE rubber foot tubs available on special service offer with 5-year guarantee.

ALTA-CO FOOT POWDER in handy, sprinkler-top cans gives soothing, quick relief; guards against reinfection.

H.D. FUNGICIDE—Economical floor wash dilutes 1–300 parts of water to kill fungi on shower and locker room floors. Effective also in foot spray equipment.

Write for literature . . .
See your DOLGE Service Man.

*EXCLUSIVE ALTA-CO TESTER
Eliminates guesswork — helps keep your foot tubs at full strength always.

expendable DOLGE
WESTPORT, CONNECTICUT

(For details, use Key # E-28 on card on page 77)

ALL THE SAFETY OF A STAIR

CHOOSE FROM 115 MODELS TO MEET YOUR EXACT NEEDS!

Only Ballymore ROLL-OR-GRIP all-welded-steel ladders assure you of *just* the right portable safety stair for each need. A standard size range from one to twelve steps; a choice of three safety treads (expanded steel lath, steel grip-strut, or rubber-clad steel plate); optional hinged shelves or removable baskets; and a wide choice of widths within each size—these *extras* add convenience to the superior safety features built into every Ballymore — the original — safety-step ladder.

BALLYMORE Safety-Step LADDERS

Factory-trained representatives in principal cities

To: BALLYMORE COMPANY, WAYNE 18, PA.
( ) Forward free catalog of Safety-Step Ladders.
( ) Have representative call to survey my safety-ladder needs.

Name _____ Title _____
Company _____
Address _____

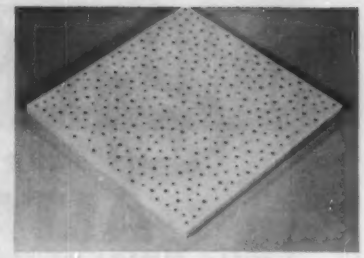
(For details, use Key # E-29 on card on page 77)

about from one section of a plant to another, often passing in and out of high-intensity noise areas, are offered the MSA Noisefoe. This device has the cushions described above attached to a spring-type head suspension for convenient donning and removal. It can be adjusted to fit any head size.

For details, use Key # NC-4 on Inquiry Card on page 77.

MINERAL FIBER ACOUSTICAL TILE

THE ADDITION OF new and improved characteristics in Minatone, mineral fiber acoustical tile, has been announced by Armstrong Cork Company's Acoustical Department. The new Minatone, made possible through recent research and manufacturing advances, has improved acoustical as well as decorative features, giving it increased value for both commercial and residential uses. Minatone combines excellent



sound absorption with complete incombustibility and has an added advantage in that it may be easily repainted without loss of acoustical efficiency. Fiberglas, blended with special agents, is used to produce the strong, rigid tile. The scattered perforations make for an almost unbroken ceiling effect.

Rated as incombustible under Federal Specifications SS-A-118a, Minatone is said to meet the most rigid fire safety codes and regulations. It can be used in any commercial, institutional, or industrial application where building codes require a completely fire-safe material. It is available in 12" by 12" and 12" by 24" tiles, finished on face and bevels with two coats of white paint. The new tile is easy to keep clean, adds insulation to the ceiling and is an excellent light reflector. It can be installed by cement, nail or screw application or by mechanical suspension methods.

For details, use Key # NC-5 on Inquiry Card on page 77.

PORTABLE AUDIOMETER

A NEW DESIGN in audiometers for accurately testing hearing loss has been announced by the Beltone Hearing Aid Co. for use in schools, industrial plants, clinics, medical offices, and other places where hearing tests are conducted.

Weighing less than 11 pounds, its circuit has been greatly simplified for better performance and easier maintenance. The unit has only one tube and one voltage regulator; and is carried in a self-enclosing case. A sliding panel protects the face of the instrument when not in use.

The new audiometer can be used for individual testing as well as for groups up to 40 persons. Other features noted by the manufacturer are: 1. For group testing the hearing loss can be read directly on the dial; 2. A new attenuator eliminates clicking sounds when the hearing loss dial is turned; 3. The masking tone is calibrated, for more accurate measurement in individual tests; 4. The instrument has one bone conduction and two air conduction receivers for individual testing; and 5. It is designed to meet the American Medical Association standards.

For details, use Key # NC-6 on Inquiry Card on page 77.

Protect Your FEET with

WOOD SOLE STEEL TOE SHOES

They Protect
They Insulate
They're Punctureproof

REECE has a shoe or sandal to fit the job.

No. 504-S—Heatproof
No. 501-S—Waterproof
No. 7704-S—Acidproof

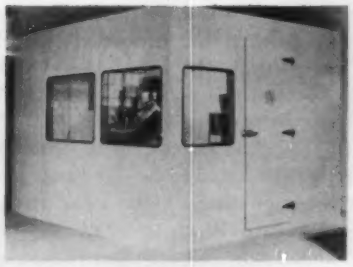
Write for catalog

REECE WOODEN SOLE SHOE CO.

There is no substitute for Reece Wooden Soles

Dept. SM 5-55 Columbus, Nebraska

(For details, use Key # E-30 on card on page 77)



SOUNDPROOF WORK & TEST ROOMS

QUIET ROOMS for offices and reccreation or relaxation areas in noisy factories, power plants, etc. are manufactured by Industrial Acoustics Co., Inc. of New York City. Use of these soundproof rooms permits supervisory and control personnel to carry on their functions unhampered by distracting factory noise. The Series 40A standard rooms are prefabricated of non-combustible materials.

For details, use Key # NC-7 on Inquiry Card on page 77.

Industrial Acoustics Co., Inc., also is offering soundproofed rooms for giving audiometric tests to employees. The Series 400 standard audiometric testing rooms are prefabricated of non-combustible materials. The room is mounted on vibration isolators to prevent structural vibrations from entering the room. The units are shipped dismantled and can be easily reassembled after erection. Available in three sizes: 36, 48 and 72 inch widths; 28, 40 and 64 inch lengths; with 94½ inch height.

For details, use Key # NC-8 on Inquiry Card on page 77.

SURETY
SURESEAL
PROTECTIVE APPAREL
PROTECTS
PROFITS TOO!

GLOVES SLEEVES SPATS LEGGINGS APRONS

Sureseal, Surety's unique synthetic for protective apparel has 4 times higher snag resistance, 10 times higher abrasion resistance and highest resistance to most industrial chemicals.

Gloves, sleeves, aprons, leggings and spats made of Surety Sureseal are designed to combine maximum protection with worker comfort and freedom of action.

. . . which adds up to less drain on profits by high safety apparel costs, worker inefficiency and discomfort.

THE SURETY RUBBER CO.
Carrollton, Ohio

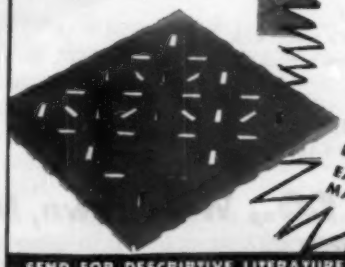
Write for Surety Protective Apparel Bulletin with actual samples of Sureseal in various weights and swatches of other synthetics for special service requirements.

In Canada: Safety Supply Co., Toronto
(For details, use Key # E-31 on card on page 77)

NOW!
AN IMMACULATE LOW PRICED STEEL FLOOR THAT IS SAFE!

ANCORETTE STEEL FLOOR PLATES

WITH ITS (33) SAFETY ISLANDS THAT CHECK THE SLIGHTEST TENDENCY TO SLIP OR SKID
(33) TONGUES ANCHORED IN OPPOSING DIRECTIONS IN FRESH CONCRETE TO INSURE IMMOBILITY AND SECURITY OF THE PLATE
TOUGH, HOT ROLLED, DIE CUT STEEL NEVER WARPS, BREAKS OR SHOWS WEAR UNDER TRAFFIC OR PRODUCTION
EASILY INSTALLED BY YOUR OWN MAINTENANCE MEN



SEND FOR DESCRIPTIVE LITERATURE . . .
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121 N. BROAD ST., ROOM 806 · PHILADELPHIA 7, PENNA.
(For details, use Key # E-32 on card on page 77)

HEARING PROTECTORS

A NEW TYPE of device for preventing the harmful effects of loud noise encountered in many occupations is announced by the American Optical Co. Their "Straightaway Sound Protectors" screen out loud, high-frequency noises, but voices are audible to the wearer. The company points out that constant exposure to noise of over 90 decibels may cause deafness, which is often compensable. Loud noise causes irritation and a lowered standard of morale; it decreases plant efficiency by hindering communication; it causes accidents, since warnings cannot be heard when drowned out by louder noises.

AO Straightaway Sound Protectors muffle the ears and the adjacent bony structure which also transmits sound. Since nothing enters the ear, the company claims that the protectors are more effective, sanitary and comfortable. Soft vinyl foam pads are held on externally, fit snugly and conform to ear contours. There are both helmet and headband models. Some are equipped with earphones which connect to communications systems.

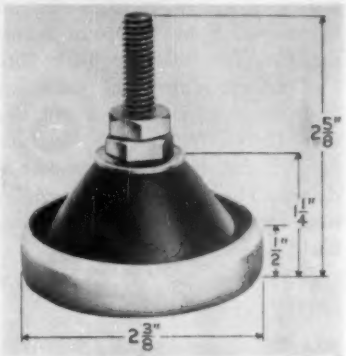
For details, use Key # NC-9 on Inquiry Card on page 77.

LIGHT DUTY MOUNTING

A NEW NEOPRENE insulated mounting for laboratory, scientific, and precision manufacturing equipment is announced by Bushings, Inc. Called "Instrumount" the new mounting is designed: to dampen vibration and insulate against shock, to serve as a means for leveling the equipment that it supports, to be impervious to the action of oils or greases, to provide a wide range of load capacity.

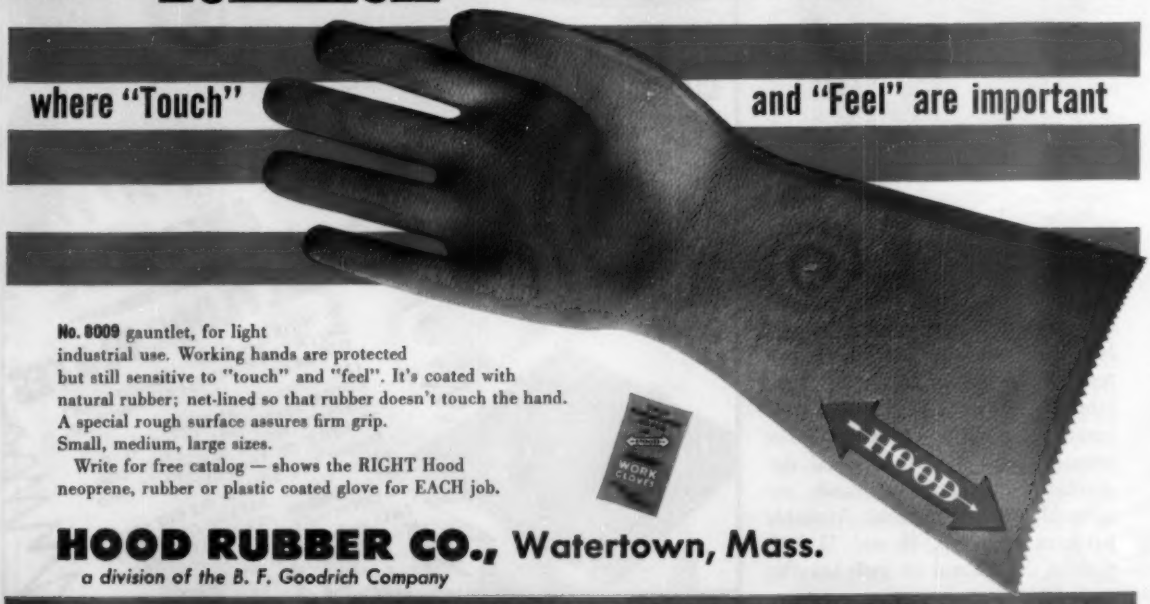
The conical shape of the neoprene element is said to be the reason that the mounting can be used at any load from 10 up to 50 pounds per mount and still maintain the necessary characteristics required for damping vibration and isolating shock.

The neoprene element has an enclosing base of stamped, plated steel



HOOD *Lightweight* Industrial Gloves — For Jobs

where "Touch" and "Feel" are important



No. 8009 gauntlet, for light industrial use. Working hands are protected but still sensitive to "touch" and "feel". It's coated with natural rubber; net-lined so that rubber doesn't touch the hand. A special rough surface assures firm grip. Small, medium, large sizes.

Write for free catalog — shows the RIGHT Hood neoprene, rubber or plastic coated glove for EACH job.

HOOD RUBBER CO., Watertown, Mass.

a division of the B. F. Goodrich Company

RUBBER - NEOPRENE - PLASTIC COATED INDUSTRIAL GLOVES

(For details, use Key # E-33 on card on page 77)

SAFETY

INDUSTRIAL FOOTWEAR

more comfort • less fatigue
fewer accidents

TOP NOTCH
Steel
SAFETY TOE CAP

WORKIN

Net lined all black 6" work shoe with non-skid DURATEST outsole. Steeltoe or plain.

INDUSTRIAL BOOT

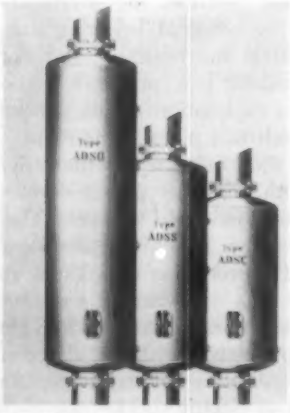
With or without steeltoe, black ribbed leg boot with DURATEST non-skid design outsole.

BEACON FALLS RUBBER FOOTWEAR, BEACON FALLS, CONNECTICUT

(For details, use Key # E-34 on card on page 77)

and at the upper end has a threaded stud for securing and leveling the equipment as well as for adjustment for height. A hole at the base is for a hold-down bolt if required.

For details, use Key # NC-10 on Inquiry Card on page 77.



STEAM AND AIR EXHAUST SILENCERS

A NEW LINE OF high velocity steam and air exhaust silencers, designed to set new standards in noise control in critical and non-critical areas, has been developed, by the Burgess-Manning Co. manufacturers and inventors of industrial noise abating devices.

The new line is known as Series "ADS" Acoustic Discharge Silencers. They are designed to eliminate high and low frequency noises caused by high velocity discharge from steam and air devices. The new silencers operate on the patented Burgess-Manning snubbing principle and employ especially designed acoustic reactance chambers plus special sound absorbing material.

The new silencers are for use on steam vents, steam safety valves, hogging jets, gas turbines, air nozzles, evacuating ejectors and similar devices discharging high velocity steam and air into the atmosphere.

Series ADS will be available in three models: ADSO for optimum silencing in critical areas; ADSS for the type of silencing required in semi-residential and light industrial areas; and ADSC for commercial silencing in non-critical areas. All models will be available in standard 8 to 30 inch pipe size, but special sizes are available upon request.

For details, use Key # NC-11 on Inquiry Card on page 77.

METAL ACOUSTIC PANELS

THE NEW "GOLD BOND" acoustipanel system is designed to provide an efficient and easy-to-maintain metal acoustical unit that would still permit instant accessibility to utilities above the ceilings, according to the manufacturer, the National Gypsum Co.

Large 2 by 4 foot perforated metal panels rest on the edges of Tee Runners when the Acoustipanel is in place. Yet, when pipes, ducts, or wiring must be reached, any nearby unit can be easily pushed up and out of the way. Acoustical efficiency is assured from the mineral wool sound-absorbing pads behind each panel.

For details, use Key # NC-12 on Inquiry Card on page 77.

The Industrial Nurse

Sight Conservation

How can an industrial nurse, in a small plant having no safety engineer, participate in sight conservation? Answers are given in the following abstracts from "Field of Vision."

She can visit problem areas and point out the importance of proper lighting; explain the necessity for wearing nonshatterable goggles and the use of other protective equipment; discuss job placement according to visual skills; interpret need for eye care; and assist in the organization and development of a plant safety program.

Are disturbances in color vision related to pathological conditions?

True color blindness is not. But there are forms of inability to perceive color that do accompany disease.

How does one donate an eye to the Eye-Bank?

Sign a release, have your signature witnessed, and give this to your next of kin, or to whoever will have charge of burial arrangements. He in turn should notify your doctor or the hospital authorities, as eyes must be removed within two hours after death. Presently only hospitals have the necessary facilities for following required procedure.

How much does it cost to obtain a cornea from the Eye-Bank?

There are no fees for the removal of eyes; there are no fees for the eyes to be used for the cornea graft operation.

What eye conditions are suitable for corneal transplant?

Favorable results are usually obtained in such conditions as keratoconus, leucoma, keratitis, and some types of corneal dystrophy.

Trends

"In no other part of the body can changes in the arteries and veins, degenerations or inflammations, be so readily recognized as in the fundus of the eye," observes Dr. Arthur Bedell. In "New York State Medicine," December 1, 1954, he offers a stimulating presentation on the use of the ophthalmoscope as a diagnostic aid in physical examinations. Constitutional maladies as diabetes, hypertension, nephritis, tuberculosis and syphilis are described relative to their effects upon the interior of the eye. Dr. Bedell states that ophthalmic examinations reveal the progress of these diseases, assist in determining prognosis and general medical treatment. Photographs illustrate the changes in ocular fundus.

Health in Industry

An exhibit on "Health in Industry," displayed from March 8 last to May 31, is being shown in the Hall of Industry of the Detroit Historical Museum. Sponsors of the exhibition include the Detroit Board of Health, the United States Public Health Service, Wayne University College of Medicine and many Detroit firms.

The exhibit portrays the wide and complex field of industrial health and describes the efforts of the industrial physician, the industrial hygienist and the safety engineer to protect the health of the worker. The highlight of the exhibit is a completely equipped first aid room with an explanation of the equipment used and activities which take place in the room.

The first section of the exhibit relates the early history of industrial health. A major part is devoted to techniques of preventing industrial diseases. The exhibit also includes respirators, which were developed in the 19th century for the protection of workers, and a modern spray board, which demonstrates a method of plant ventilation. Protective equipment, such as gloves, aprons, goggles and protective cream, is also on display. Included in the exhibit is a portable resuscitator, used in the treatment of electric shock.

Motion pictures about the use of safety goggles, dust respirators and first aid are shown at 3 P.M., Tuesdays, Thursdays and Saturdays and a full length feature on industrial medicine is presented at 8 P.M. Fridays in the Detroit Historical Museum.

Part Time Industrial Nursing Service

I. Is Nursing Service Available for the Small Industry?

Yes, nursing service is now available on a part time as well as a full time basis. This service can be adapted for use in small as well as medium-sized or large industries. In some instances one nurse covers two or three plants in one day. Other existing plans call for as little as a few hours a week or even twice a month visits to the very small organization. Usually, the married nurse with home responsibilities, the nurse who is continuing her studies, or the nurse who simply wishes to work part time, are candidates for this phase of industrial nursing. Then too, some visiting nurse associations provide industrial nursing service on a part time basis.

II. What Kind of Nursing Service Does this Industry Need?

The nurse selected for industrial work has multiple responsibilities; chiefly they are—to the workers, to management, to the physician, and to the community. The industrial nurse must have a natural liking for people and a respect for their personalities in order to establish the rapport necessary to successful work. Her relationship to all personnel gives her a strategic value as interpreter of health practices and promoter of good will.

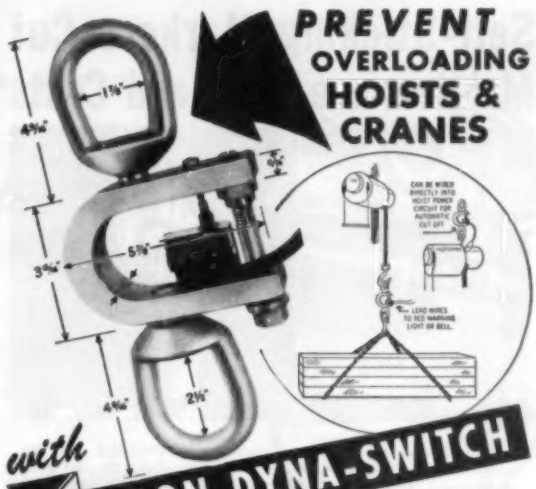
The industrial nurse's ability to evaluate the character and importance of symptoms and to record them properly makes her a valuable adjunct in the proper care and referral as well as the compensatory and legal aspects of industrial illness and injury.

III. What Would Be the Functions of the Part Time Nurse in Industry?

A part time industrial nurse would be expected to accomplish some or all of the functions listed depending on the amount of time her services had been contracted for:

1. Emergency care of the ill or injured employee.
2. Follow-up and proper referral of those cases needing the attention of a doctor.
3. Assistance in the rehabilitation of disabled persons.
4. Development and maintenance of records and reports.
5. Health counseling, individual or group.
6. Proper use of community resources.
7. Maintenance of the dispensary. Ordering of supplies. Supervision of cleanliness.
8. Assistance to management in: a. Developing and carrying out a suitable employee examination program; b. Integration of medical service with indoctrination of new employees; c. Participation in safety activities.
9. Cooperation with family physician in maintaining employee health.

(Continued next page)



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(For details, use Key # E-35 on card on page 77)

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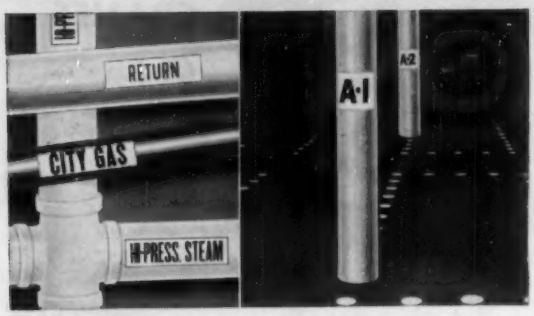
(For details, use Key # E-36 on card on page 77)

Self-Sticking Markers Cut Maintenance Time and Costs



Self-Sticking Markers which cut maintenance time and costs are available from the W. H. Brady Co., Milwaukee. One of their widely-used products, ALL-TEMPERATURE PIPE MARKERS, stick permanently to pipes as hot as 300°F. Millions of them in use in plants of all types today. They conform to ASA standards and give you a fool-proof, cost-cutting method of pipe identification. Write for Bulletin No. 135-B.

Brady Self-Sticking DOTTED LINE AISLE MARKERS offer a fast, low-cost way to mark aisles. They are so tough they outwear painted lines 5 to 1. Miles and miles of aisles are marked with these markers in plants everywhere. Write for Bulletin No. 141.

A quick, economical method for marking areas, bays, posts, bins, pallets, etc., is found in Brady Self-Sticking All-Purpose NUMBERS and LETTERS. These individual NUMBERS and LETTERS let you make up any combination of markings right on the spot. Stocked in six sizes, these handy Markers fit many plantwide Marking needs perfectly. Write for Bulletin No. 165.

Manufacturer: W. H. Brady Co., 741 W. Glendale, Milwaukee 12, Wis.
(For details, use Key # E-37 on card on page 77)

GETS-A-LITE GUARD and GUIDE
Quickly and Easily Installed by Anyone — No Tools Needed!

- Simply slip GETS-A-LITE GUARD AND GUIDE over the fixture, as illustrated.
- Made of indestructible spring steel wire. Nothing to break, get out of order or replace. Will last indefinitely.
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- Available for 40 watt and 100 watt fluorescent lamps.

GETS-A-LITE Company—Dept. SM-55
3865 N. Milwaukee Ave., Chicago 41, Illinois

(For details, use Key # E-38 on card on page 77)

10. Special services such as inoculations, vaccinations, etc. (under the supervision of a physician): a. Catastrophic planning; b. Environmental health control; c. Welfare and benefit activities.
11. Training of auxiliary workers in first aid care.

IV. How Much Will Nursing Service Cost?

Standards for nurses' salaries are set up by the personnel practices of each state, on hourly, or part time, or consultant basis.

In many instances, a small part time medical service costs no more than one full-time clerk or secretary handling compensation and disability records and correspondence.

V. What Will Be the Return on this Investment?

Efficient nursing service frequently reduces losses due to:

1. Time taken up by employees traveling to and from doctor's offices.
2. Lowered efficiency of ailing employees.
3. Absenteeism from more serious illnesses which might be recognized in the early stages thus preventing disability.
4. Pilferage of first aid boxes.
5. Labor turnover for medical reasons.
6. Accidents caused by impaired health or poor mental attitude.
7. Late care of injuries, late detection of illnesses.
8. Lack of follow-up care.
9. Poor industrial relations.
10. Disease among older aged employees.

A Man's Worth His Salt Tablets

(From page 51)

to hold its normal amount of water.

The remaining problem that had to be faced in connection with the use of salt for heat relief was the fact that some individuals report nausea when they take salt tablets. An impregnated salt tablet, processed and patented by one of the country's largest salt companies, overcomes this problem. These impregnated salt tablets control the dissolving rate allowing the user to get immediate benefit without absorbing all the salt into his system at once.

Contrary to popular fallacy, the medical profession has found no evidence that salt intake causes hardening of the arteries since the salt is secreted through action of the kidneys.

Perhaps the clinching argument for the use of all salt tablets is their low cost. For less than a penny per person per week, many progressive industrial plants and offices provide salt tablets in handy dispensers near water coolers. In this very inexpensive way management has cut down the very costly toll of lost man-hours, reduced efficiency, and serious accidents which can result from heat fatigue.

Learning..... the hard way

A HAPPIER ENDING THAN MOST . . .

A LINEMAN'S HELPER had one leg almost completely severed and the other severely injured in what would be called a "freak" accident, if there were such a thing as a "freak" accident. Which there isn't.

While the line crew was stretching guy wire between poles, a passing bus became entangled in the wire which, in turn, looped around the legs of the helper. Immediate first aid treatment by trained members of the crew, and prompt dispatch to the hospital saved the man's life. Due to the severity of his injuries, one leg was amputated at the knee. Latest reports indicate good progress is being made by the lineman's helper; and, after being fitted with an artificial limb, he will be returned to work at another job with the same employer.

Great credit is due the first aid men in the crew for the efficient way they cared for their co-worker until he could be placed under medical treatment. Their action points up the need for first aid training for all personnel in industries where men work in small groups in the field. Of course, this accident should never have happened. Either the men should have been working far enough from the roadway so that the wire could not come in contact with passing vehicles, or one side of the road should have been closed to keep traffic away from the wire.

SQUARE PEG IN A ROUND HOLE

A WORKMAN WANTED to fire a heater, so he wrapped bunting around an end of a wire, saturated the bunting with kerosene and lit it. Then he tried to push his homemade torch through the small opening in front of the heater. However, the roll of bunting was too big and stuck in the opening. Thinking quickly, and wrongly, he turned on the gas hoping the burner would light. It didn't, so he turned the gas up higher and caught hold of the wire near the opening, and tried to force the lighted torch through. Just at this moment, the gas ignited and fire flashed back through the opening burning his hand.

This accident could have been prevented by the old Army "Dry-Run" method. Before he tried to push the torch into the heater the employee should have tested the fit without lighting the torch. Once having made that error, he could still have prevented the accident by turning the gas off immediately when it failed to light. Either he was improperly trained or he wanted to learn the hard way.

ANOTHER BARN DOOR CLOSED . . .

A MAN WAS CARRYING a large box up a ladder to the floor above. His foot slipped off the rung and he fell to the ground. It took him six days to get back on his feet.

It was discovered after the accident that the non-skid surface on the ladder steps had worn smooth. Now, new non-skid surfaces have been installed. The barn door is shut . . . but the employee had to teach management the hard way.

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(Use Key # E-39 on Inquiry Card on page 77)

For Safety
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Combines utmost protection and style. Exclusive patented features found in no other hat.

Write for Free Sample or Order Direct from us

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CHIC MAID HAT MFG. CO., Inc.
630 HIGH STREET
BUFFALO 11, N. Y.

(Use Key # E-40 on Inquiry Card on page 77)

James McMillan, prominent figure in Detroit banking and business circles, has been elected president of The Boyer-Campbell Company, Detroit distributor of mill supplies and industrial and safety equipment. Mr. McMillan, formerly Vice-President and Treasurer, succeeds William P. Goudie, who is entering semi-retirement after more than 40 years of service with the organization. Mr. Goudie will continue as a director.

Mr. McMillan will be associated in the management of the business with Robert G. Campbell, son of one of the company's founders who was re-elected Vice-President and Secretary and John F. Phillips, re-elected Vice-President in Charge of Sales. Mr. McMillan will continue as treasurer.

E. Weldon Schumacher has been elected president of American Optical Company, succeeding Walter A. Stewart who, at age 65, has retired in accordance with company policy. The new president has been affiliated with AO since 1938. For a three-year period he worked in all departments, and then directed the establishment of the new AO plant in Brattleboro, Vt. He returned to Southbridge in 1947 to become general manufacturing manager. In 1948 he was elected vice president for operations, and in 1953 a trustee of the company.

Edward J. Cross has been appointed Manager of the Glove Division at Hood Rubber Company, a Division of The B. F. Goodrich Company, Watertown, Mass. Cross first joined the Hood team at the Chicago Branch as Western Representative for the Glove Division.

A man who has labored more than 44 years to make mining a safer occupation was honored for his achievements by the American Institute of Mining & Metallurgical Engineers during the organization's annual meeting in Chicago. He is George H. Deike, Sr., board chairman of Mine Safety Appliances Company, Pittsburgh. Mr. Deike received the AIME's Erskine Ramsay Gold Medal Award "in recognition of his achievements in bituminous and anthracite coal mining."

Mr. Deike started his business career as a mining engineer after he was graduated from Pennsylvania State University in 1903. In 1911, he joined the newly formed United States Bureau of Mines and worked in the Mine Rescue Division. He and another engineer, John T. Ryan, decided, in 1914, to form their own company to provide miners with equipment that would eliminate many of the perils of mining. Thus, Mine Safety Appliances Company was founded.

Despite the daily pressure of his business, Mr. Deike has devoted much of his time to organizations dedicated to making mines safer places in which to work. He is one of seven coal industry men who founded in 1924 the National Mine Rescue Association, and has been active in many other safety groups.

The Fire Equipment Manufacturers' Association, Inc., representing the producers of all types of portable fire extinguishers and extinguishing agents, has elected H. Louis Stettler, Jr., Executive Vice President of Elkhart Brass Mfg. Co., Inc., as President. To assist him in carrying forward the Association's program of public service to prevent fire through the use of proper fire extinguishing agents and equipment, the following officers were elected: 1st Vice President, Paul R. Larimer, General Sales Manager, Ansul Chemical Co.; 2nd Vice President, R. L. Weir, General Sales Manager, The General Detroit Corp.; Treasurer, Paul Nurkiewicz, Vice President, Stop-Fire, Inc.; Commissioner, Offices of Hanson & Shea, Inc.

Mr. P. W. Eberhardt, Vice President of Walter Kidde & Company, Inc., has served the Association as its President for the past two years and now becomes a Director.

Speedi-Dri Corporation has announced that beginning July 22nd it will handle the marketing, on a nation-wide basis, of its floor absorbents. Up to now, the corporation has been selling only in New York, Pennsylvania and New England. Mr. R. A. Hogan will be sales manager and Larry Mank assistant sales manager.

The company is now a subsidiary of Minerals and Chemicals Corporation of America. There will be no change in the nature of the Speedi-Dri products and in the fall the subsidiary will move from Philadelphia to a new building now under construction at Menlo Park, N. J. Warehouse facilities will be maintained throughout the United States.

E. J. Girk, formerly vice president in charge of sales and advertising for the dental and industrial divisions of the Torit Manufacturing Company, has joined R. E. Dyment, Torit representative in Detroit. The Detroit firm will be known as Dyment

& Girk Associates. Girk, who spent 24 years in the home office of Torit, will continue as a director.

Frank R. Chase has been named as sales manager for the Torit industrial division. Chase was sales promotion manager for Multi-Clean Products Company of St. Paul for five years before joining Torit's staff. He will be in charge of sales and advertising for the Torit dust collector products.

Michael L. Duggan has been appointed General Manager of the Industrial and Prescription Division, Pennsylvania Optical Co. of Reading, Pa. Mr. Duggan was formerly associated with American Optical Co. in their safety and sun glass division, and also was safety director of the Army installation at Fort Monmouth, N. J. He brings to his new association at Pennsylvania Optical a wealth of experience in the field of eye protection and conservation of vision.

S. R. Baker, chairman of the board and president of the unified Pyrene Manufacturing Company and C-O-Two Fire Equipment Company, has announced the election of Maynard A. Laswell to executive vice president in full charge of over-all operations. Ralph F. Batch has also been elected to vice president in charge of industrial relations and allied activities.

The new titles and responsibilities were necessitated by the unification of the two fire protection equipment producers, which has been virtually completed. General offices and principal manufacturing operations are located in Newark, with branches in Atlanta, Chicago, Dallas and Los Angeles, and subsidiary operations in Pennsylvania and Canada.

Stanley J. Wilz has been appointed representative for Mine Safety Appliances Company in the territory of Mexico. Mr. Wilz, a graduate of the Illinois Institute of Technology and the American Institute of Foreign Trade in Phoenix, Arizona, has been with Mine Safety since September 1954. He will cover parts of Nicaragua and Guatamala in addition to Mexico.

Charles E. Meluney, Jr. has been appointed Houston District Sales Manager for the Electrical Wire and Cable Division of John A. Roebling's Sons Corporation. Mr. Meluney will have his headquarters at Houston and will be in charge of the division's sales activities covering most of Texas, as well as Oklahoma, Louisiana and Mississippi.

Cordley & Hayes, New York, N. Y., manufacturer of electric water coolers, announces the appointment of Lawrence D. Toolan as Sales Manager. Toolan, who

ORDER WALL DISPENSORS TODAY—refillable, self-dispensing cabinets for care of personnel eye gear. A time-saver in any department. Includes spray type plunger capped to bottle of Klear-Glass, feeding supply of lens tissues, receptacle for used tissues. AVAILABLE ALSO as non-drip pocket applicator and 1½ and 3½ oz. spray bottles for personal, car and home use.

CUT MAN-HOUR LOSSES
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Eliminates frequent time breaks required for manual wiping of protective masks, goggles or eyeglasses, immediately upon application. Benefits of this superior double-duty DEFOGGING and CLEANING agent last for days. Dust-resistant too.

Klear-Glass insures greater accuracy and increased safety for worker and co-worker alike. It avoids hazard of sudden steam or humidity fog-outs. Vital applications include the foundry . . . at the lathe . . . on the assembly line . . . in the mine pit . . . in the refrigeration plant . . . with the truck fleet . . . in the business office.

Equally effective on glass or plastic surfaces.

ASK YOUR DEALER or write to Dep't P-3 for literature and prices

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(For details, use Key # E-41 on card on page 77)

Win the
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Use PIONEER Stanzoils®
Only a liquid-tight glove gives positive physical protection from chemicals and germs that cause hand dermatitis. Also protects products from contamination by hands.
PIONEER *milled* neoprene stands extra hours of use in contact with oils, acids, caustics, detergents and solvents—has higher tensile, greater tear resistance than any other oil-resistant rubber.
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STANZOIL
Quality Gloves for 35 Years

(For details, use Key # E-42 on card on page 77)

YOU CAN'T FALL
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SAFETY DEVICE FOR LADDERS

Prevents death and injuries from falling.

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Automatic: Positive. Will catch workman if he starts to fall even if unconscious.

Simple to operate. No upkeep. Requires no attention from climber.

Notched rail **hot dipped galvanized.** Entire equipment rust and corrosion proof.

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(Use Key # E-43 on Inquiry Card on page 77)

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SAFETY SIGNS FOR ALL PURPOSES
STANDARD SIGNS, INC.
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(Use Key # E-44 on Inquiry Card on page 77)

was formerly assistant sales manager, has had twelve years experience in product distribution and sales organization with Phoenix Mfg. Co., American District Steam Co., Sturtevant Division of Westinghouse, the American Radiator Co.

Excavation has started on a new $300,000 Engineering Building at The Cleveland Crane & Engineering Co., Wickliffe, Ohio. The building will accommodate 80 engineers and draftsmen engaged in designing overhead traveling cranes, conveyors, presses and shears.

William H. Loveman, President, American Industrial Safety Equipment Co. of Cleveland, Ohio announced the appointment of Donald T. O'Shea as Manager of the Industrial Sales Division. In his capacity, Mr. O'Shea will head a department which will be directly concerned with present day problems of eye protection in major industries, and the development of new devices to solve them.

Mr. O'Shea, who is a member of the American Society of Safety Engineers, has had a number of years of experience in the industrial safety field dealing with industrial concerns, utilities and railroads concentrating on head and eye protection devices.

The Chas. A. Strelinger Co., 149 E. Larned St., Detroit 26, Mich., has been appointed warehouse distributor for Berylco non-sparking safety tools produced by The Beryllium Corporation, Reading, Pa.

The Detroit firm will serve safety tool users throughout the state of Michigan from its own stock items and with its own sales force.

William L. Krapf, Manager of Bulkley, Dunton Processes Inc. of New York, N. Y., has announced the appointment of H. E. Danby Company, Inc. of Indianapolis, Ind., Nicholas A. D'Arcy, Jr., of Huntington Park, Calif., W. H. Davidson Company of Wayne, Pa., and John D. Homan of Tampa, Fla., as the sales agents and representatives of Bulkley, Dunton in their representative territories. The New York firm manufactures colloidair separators for the clarification of waste and process liquids for industry and commercial uses.

Mathematical Computing Service specializes in performing services for industries desiring engineering calculations, charts and monographs of a high degree of complexity and the treatment of related mathematical problems in the field of industrial engineering. An important function of the group is the mathematical formulation and complete solution of a problem from given physical data. The staff consists of consultants holding Doctorate Degrees who are qualified to treat problems in applied mathematics related to the physical sciences. The address of the organization is 67–24 211th St., Bayside 64, N. Y.

George C. Gregson, plant manager of the wire rope divisions of American Chain & Cable Company for the past 30 years, retired this spring. He has been succeeded by Ernest S. Wellhofer who will take over his duties at the company's Wilkes-Barre, Pa. and Houston, Texas plants. Charles H. Layton replaces Mr. Wellhofer as chief wire rope engineer.

Johnson and Johnson, manufacturer of first aid items, has appointed Larido Corp., 381 4th Ave., New York City, as exclusive distributors to the advertising specialty, premium, and gift trades. Eight types of first aid kits, with special space for advertising imprints, are now available for distribution.

Purchase of the assets of the Thermalectric Engineering Company (Van Nuys, Calif.) by Walter Kidde & Company, Inc., (Belleville, N. J.) was announced by John F. Kidde, company president. The new division manufactures bi-metallic and liquid expansion heat switches used for overheat or fire detection in aircraft engines and as controls for compartment heater units, a de-icer fluid heater, and other control devices.

The Kidde organization has also announced that William K. Winstead has been appointed southeastern District Manager for the fire extinguishing and detecting equipment of Walter Kidde & Company, Inc. His territory covers eleven states with headquarters at 101 Marietta Street, N. W., Atlanta, Georgia. Mr. Winstead has had wide sales experience in the south and is familiar with its industrial problems.

An expansion and modernization program now under way at the Fairmont, West Virginia, glass works of the lamp division of the Westinghouse Electric Corporation is expected to be completed in late July, according to F. M. Sloan, general manager of the lamp division. When complete, the new facilities will make it possible for Westinghouse to manufacture several new types of glass and to expand production of present types. A second expansion program is to be undertaken later in the year to extend manufacturing lines at Fairmont.

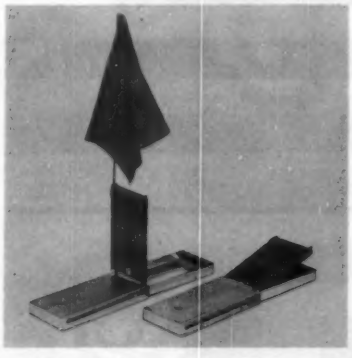
Appointment of Edward D. Flavin as Vice President of the Johns-Manville Sales Corporation and Manager of Special Industries, Industrial Products Division, has been announced by J. A. O'Brien, Vice President and General Manager of the Division.

transportation safety

SAFETY FLARE

A SIMPLE PULL on the cover of the Kilborn-Sauer flare sets it up for emergency use by operators of motor vehicles in the event of flat tires or breakdowns. When the cover is pulled, the flare automatically springs into an upright position, ready for use. For storage, the flare is just as easily closed by sliding the base together. Spring tension prevents rattling when closed.

Equipped with a 3-inch diameter red Stimson reflecting lenses, the flare meets all state requirements and all I.C.C. specifications. It is made of heavy gauge aluminum, and has a socket for a 12 by 12 inch



red flag, with a metal staff, for daylight warning. The flag is stored inside the flare. The hinge is riveted to prevent lost nuts.

A flare set consists of 3 flares in a bracket, which is easily fastened to the body of the vehicle. Closed, the flare is 5 by 10 inches by five-eighths of an inch overall. Opened, the base stands 20 inches long, and the flare stands 10 inches high. Available singly or in sets of 2 or 3.

For further details, use Key # TS-14 on Inquiry Card on page 77.

They're new . . . They're uniform . . . and they're called . . .

"DRIVER" STOPPING DISTANCES!

ACTION AIMED at ending years of indecision about just how long it takes to stop a moving car or truck on a highway has been taken at a conference of some of the nation's top traffic experts.

Original concepts for stopping distances involved only the distance traveled by a vehicle after application of the brakes. Later considerations included the distance traveled while the driver acted to bring a vehicle to a stop. Now we are aware that there is still another factor involved—the distance traveled while the driver recognizes the need for a stop and decides to do something about it. Consequently, the charts of the present day are, actually, a tabulation of ***driver stopping distances.***

The principal result of the conference is the development of a standard motor vehicle stopping distance chart. The chart is designed to show how far a given vehicle will travel at a given speed between the time the driver perceives danger and comes to a full stop. It will be used as a standard for all stopping distance charts issued by unofficial accident prevention agencies in the future.

As a basis of uniformity, the conference adhered to definitions, terminology and technical decisions already established by the National Committee on Uniform Traffic Laws and Ordinances and the Society of Automotive Engineers. Thus, these factors are involved in the uniform tables:

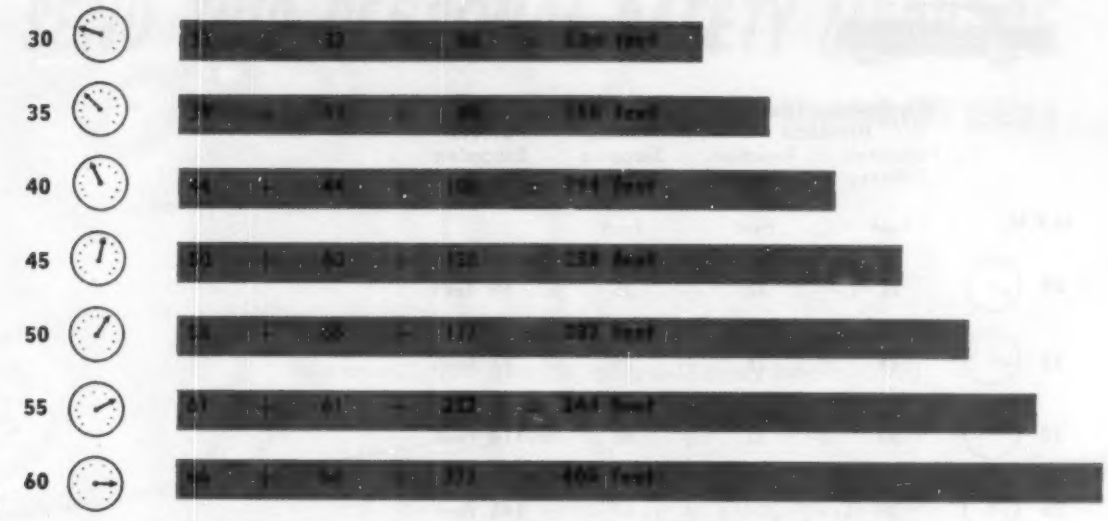
Perception-Reaction Distance—composed of two elements, ***reaction distance,*** which is a known and measurable item and ***perception distance,*** accepted as a separate factor and equal to reaction distance. Based on available data for "average drivers," .75 seconds was agreed upon for reaction time. Hence, perception time is also .75 seconds. Converted into the number of feet traveled at various speeds, the total of these two equal factors provides the Perception-Reaction Distance.

Vehicle Stopping Distances from speeds of 20 m.p.h. taken from the Uniform Vehicle Code. Converted

(Continued on page 68)

M.P.H.	Perception-Reaction Distance: Perception Distance (Feet)	Perception-Reaction Distance: Reaction Distance (Feet)	Vehicle Stopping Distance (Feet)	TOTAL Driver Stopping Distance
20				
25				
30				
35				
40				
45				
50				
55				
60				

M.P.H.	Perception-Reaction Distance: Perception Distance (Feet)	Perception-Reaction Distance: Reaction Distance (Feet)	Vehicle Stopping Distance (Feet)	TOTAL Driver Stopping Distance
20				
25				



M.P.H.	Perception-Reaction Distance: Perception Distance (Feet)	Perception-Reaction Distance: Reaction Distance (Feet)	Vehicle Stopping Distance (Feet)	TOTAL Driver Stopping Distance
20	[illegible]	[illegible]	[illegible]	[illegible] Feet
25	[illegible]	[illegible]	[illegible]	120 Feet
30	[illegible]	[illegible]	[illegible]	[illegible] Feet
35	[illegible]	[illegible]	[illegible]	[illegible] Feet
40	[illegible]	[illegible]	[illegible]	253 Feet
45	[illegible]	[illegible]	[illegible]	[illegible] Feet
50	[illegible]	[illegible]	[illegible]	[illegible] Feet
55	[illegible]	[illegible]	[illegible]	412 Feet
60	[illegible]	[illegible]	[illegible]	[illegible] Feet

Passenger Vehicles, Not Including Buses

M.P.H.	Perception Distance (Feet)		Reaction Distance (Feet)		Vehicle Stopping Distance (Feet)		TOTAL Driver Stopping Distance
	Perception-Reaction Distance						
20	22	+	22	+	25	=	69 feet
25	28	+	28	+	35	=	91 feet
30	33	+	33	+	48	=	114 feet
35	39	+	39	+	67	=	145 feet
40	44	+	44	+	90	=	178 feet
45	50	+	50	+	117	=	217 feet
50	55	+	55	+	148	=	258 feet
55	61	+	61	+	185	=	307 feet
60	66	+	66	+	228	=	360 feet
65	72	+	72	+	275	=	419 feet
70	77	+	77	+	332	=	486 feet

"Driver" Stopping Distances

(From page 65)

to higher speeds by factors derived from results of Bureau of Public Roads tests.

It must be pointed out that laboratory tests of Driver Stopping Distances will frequently show results far below the number of feet indicated by the charts. Under such controlled test conditions, drivers *know* that an emergency situation is to be encountered, so perception time and reaction time are considerably shortened.

The new chart, while not intended to have any "legal" standing, will wipe out major differences among the dozens of such charts currently being distributed to the driving public by insurance companies, safety councils, transportation and transit organizations, motor vehicle bureaus, driver education authorities and others.

Most important decision at the meeting, attended by representatives of the Association of Casualty and Surety Companies, the United States Bureau of Public Roads, the American Automobile Association, the American Association of Motor Vehicle Administrators, the American Trucking Associations, the American Transit Association, the Center for Safety Education at New York University and the National Association of Independent Insurors, was unanimous acceptance of a standard "perception-reaction" time for drivers. Previously, there had been no general agreement among designers of the charts on the perception-reaction time.

With acceptance of a standard perception-reaction interval, defined as 1.5 seconds, it is now possible to chart exactly how far a vehicle will travel, both before and after the brake is applied.

Chart data by courtesy of National Conference on Uniform Stopping Distance Charts.

SEND THIS PERSONAL SAFETY MESSAGE

TO EVERY ONE OF YOUR EMPLOYEES!

Safety is made attractive... vivid... colorful...

each worker clearly sees how safety benefits him.

You get enthusiastic safety cooperation instead of

tolerance... from every employee... every month.

YOUR
Safety News
PUBLISHED IN THE INTEREST OF YOUR SAFETY
THE JOHN DOE COMPANY, INC.
PROTECT YOURSELF
3
WAYS
There are three safe practice ways that do the most good in keeping free of accidents, all based on your personal desire to know safety and keep yourself safety-minded by studying the hazards of your work. They are:
1 Make sure all guards are in place and working and wear the personal protective equipment your job requires.
2 Learn the safe way to do a job and do it just that way.
3 Report, avoid or eliminate all unsafe conditions.
As we see it: Safety is part of every job and like any craft it requires skill.
John Doe

Size 5½" wide x 8½" deep

...talks the worker's language!

Full of color, pictures, humor and snap, it makes safety interesting and down-to-earth. 12 times a year it covers every accident hazard. Nationwide, leading industrial firms state it's the *only safety paper their employees will read* . . . and take home to their families.

It gives you the advantages of personal contact, saving time and money. When it prevents one Lost Time accident, it has more than paid its cost for the year. Try it... it works!

Your Imprint Here!

makes YOUR SAFETY NEWS your own publication... a good-will ambassador ... another force for better industrial relations.

Every employee feels bucked-up by a note from the boss. If you desire, your facsimile signature can be printed here.

Your Signature Here

NOTE:
Your Safety News is designed to promote better employer-employee relations. Every item is carefully weighed from this viewpoint.

INSIDE PAGES

(pages 2 and 3)

So Goes the World
Lions & Machinery have Hungry Jaws
YOU DON'T HAVE TO TWIST ITS TAIL
NEVER REACH INTO MACHINERY WHILE IT IS RUNNING!
Guard Well
WANTED
from the CARELESS ACTS of others the WISE MAN corrects his own
SAFETY SHOES
WORK OVERTIME
Dress for Safety
SAFETY SHOES
FALLS
FALLS KILL 60 EVERY DAY

IN YOUR EMPLOYEE'S INTEREST

Your employee's self interest in his own safety is always emphasized. Even household hazards are covered to keep him safety-conscious every minute, not only in the plant, but at home and on the way to work.

CHOCK-FULL OF ILLUSTRATIONS

Artwork is carefully chosen to lodge home each point. The cartoon style makes YOUR SAFETY NEWS as familiar and as welcome as the Sunday supplement.

THE "FOLKSY" APPROACH

Keeping the content folksy, adding the grace note of humor, delivers your safety message with a nudge instead of a bludgeon. Your monthly chat gets enthusiasm instead of tolerance.

VIVID COLOR

Generous use of color gives sparkle, adds to the attention-riveting qualities of YOUR SAFETY NEWS. Each issue is as lively as any news-stand favorite.

HOW TO ORDER

YOUR SAFETY NEWS may be ordered with either the Standard imprint or with your Own Special Imprint. The Standard Imprint reads PLEASE COOPERATE FOR THE SAFETY AND HEALTH OF ALL . . . signed . . . A SAFE WORKER.

You can personalize YOUR SAFETY NEWS with the name of your firm and the name or facsimile signature of a company representative as illustrated. Give full instructions for your Special Imprint on the order blank below.

Item (1) FIRM NAME. Please show the name of your firm exactly as it is to appear.

Item (2) INDIVIDUAL NAME OR SIGNATURE, if desired. On a sheet of white paper, please show, in black ink, the individual name or signature, if desired, which is to appear each month on the first page of YOUR SAFETY NEWS.

NOTE: Although a personal signature is effective, some firms substitute: SAFETY DEPARTMENT, YOUR SAFETY COMMITTEE, A SAFE WORKER, etc.

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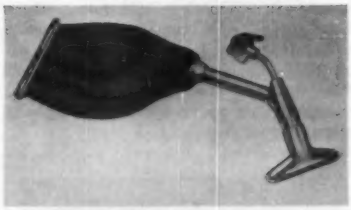
What's New...

For your convenience in obtaining descriptive literature of products listed here, use the Reader's Inquiry Card. Just write in the code number given with each item. Or send written requests to:

Service Dept.,
SAFETY MAINTENANCE & PRODUCTION



AIR LINE HAND VACUUM

(Use Key # 884 on Inquiry Card on page 77)

IT'S NOW POSSIBLE to convert any air line into a powerful vacuum cleaner for either wet or dry pick-up with the Bennett Industrial Air-Operated Cleaner, available from M-M-A, Inc. Completely redesigned, this new cleaner now meets the needs of hundreds of industries where good plant housekeeping and safety factors are of concern.

The unit picks up the particles of lint, waste, hair, filings, lathe cuttings, etc. and deposits them into an easily emptied container. Or, it can easily be connected to larger waste collecting installations, drums, etc. It can also be used for wet pick-up and will empty a 50-gallon drum of water in about 60 seconds.

The absence of electrical parts and its non-ferrous construction eliminate the chance of sparks and the danger of fire in operations where combustibles are handled. A convenient standard valve arrangement with trigger can be used as wanted, or the unit can be set to produce a steady vacuum for installations on grinders, belt sanders, etc. Weighing less than 1½ pounds, it is easy to handle and has no moving parts.

TEXTILE FLAME RETARDANT

(Use Key # 885 on Inquiry Card on page 77)

A NEW, RENEWABLE type flame retardant, "X-12," designed to give improved temperature and aging stability in flame retarded materials has been developed by the Grasseli Chemicals Division, E. I. du-Pont de Nemours & Co., Inc. It is easy to apply in water solution, followed by drying, and may be used on paper, cotton, linen, viscose rayon and other cellulosic materials, but not on acetate rayon or synthetic fibers

The temperature stability of X-12 is an important advantage. It means longer service life for the treated material and shorter processing time because fabrics can be dried and ironed at higher temperatures. Special agents in the compound insure penetration, retention of original fabric or paper properties, and the prevention of flame after-glow. It has little or no effect on the color or light-fastness of a wide range of dyes. The compound is a crystalline powder which is dissolved in hot water. It resists dry cleaning solvents, but must be reapplied after laundering.

In the textile field, X-12 is suitable for treating workmen's clothes, curtains, bed spreads, felts, rugs, upholstery, etc. In the paper industry it can be used on cardboard, insulating papers, matchboard, crepe, tissue, molded paper products, etc.

SAFETY BANNER-OF-THE-MONTH

(Use Key # 886 on Inquiry Card on page 77)

TO HELP KEEP employee interest in safety alive and to provide a variety of safety reminders, L. G. Harkins & Co. is offering a unique "Banner of the Month" plan. Two types of banner programs are provided: 1. the subscriber receives a new general safety awareness banner each month for a year; 2. the 12-month subscriber can select specific banners from a collection of over 400 different slogans. Among the many subjects covered are wearing goggles or other eye protection, good housekeeping, hand safety, foot safety, tool safety, following safety rules, etc. A catalog of the slogans is available.

The banners are 10 feet long and 42 inches high, in two and three colors on special heavy banner cloth. Those for outside display have hemmed edges and have 20 feet of rope double-stitched along the top and bottom for display at plant gates or other strategic outdoor locations. Banners for inside hanging have four eyelets evenly spaced along the top and bottom.

AIR BLOWER RESUSCITATOR

(Use Key # 887 on Inquiry Card on page 77)

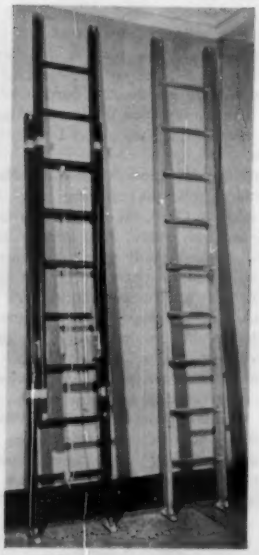
A NEW CONCEPT of automatic artificial respiration is embodied in the Seeler Universal Resuscitator, announced by Globe Industries, Inc. The unit is designed to operate from a fresh air blower and thus can be run off an electric current of 110; 28, or 8 volts. Because the resuscitator can be so operated, its weight is less than ten pounds.

Originally developed at the Aero Medical Laboratory, Wright-Patterson Air Force Base, Dayton, Ohio, the resuscitator is well suited for the police, fire, rescue squad, ambulance and other emergency services because it can be operated on the current from a car or truck battery. For Civil Defense and military use the resuscitator could be pressed into service where oxygen supplies were limited or unavailable. The unique resuscitator valve is designed to operate on positive and negative pressure or on positive pressure alone. It is also available with an oxygen cylinder. This unit weighs twenty-nine pounds and can be used with an air blower unit by using a simple connection.

SILICONE TANNED SHOES

(Use Key # 888 on Inquiry Card on page 77)

LEATHER SAFETY shoes which are treated in the tanning stage with Dow Corning "Syllfex" are now available from Record Industrial Co. This treatment renders the shoes waterproof, yet allows the leather to "breathe." In addition to water, the silicone product also stops chemicals, oil, bleach and caustic absorption. These liquid-proof shoes are suitable for wet conditions, as found in chemical plants, oil refineries, pulp mills, construction work, etc. They have neoprene soles and dacron stitching for longer wear under the most severe conditions. The silicone treated safety shoes are available in both oxford and high styles.

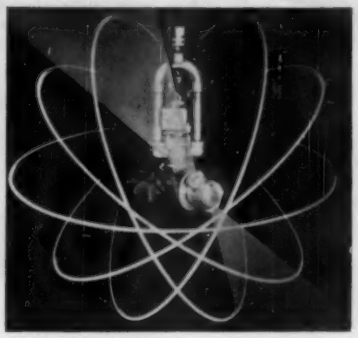


FIBER GLASS LADDERS

(Use Key # 889 on Inquiry Card on page 77)

A NEW TYPE of fiber glass ladder combines the light-weight qualities of light-metal ladders with the non-conducting qualities of wood ladders. Developed by the Putnam Rolling Ladder Co., the new ladder utilizes the tough fiber-glass sandwich construction used in the fabrication of boats, airplanes and auto bodies. The rails have cores of balsa wood laminated and coated with fiber glass re-enforced plastic. The aluminum or magnesium non-twisting rungs are plastic-welded to the rails to become an integral part of the ladder. The result is a smooth, splinter-free ladder of light weight for ease of handling.

The manufacturer claims that the ladder's strength-to-weight ratio exceeds those of most metals and because of its resistance to chemicals, heat and water absorption, it is more durable than wood. Standard-duty and heavy-duty types are available in both single and extension models of various lengths.



THREE-DIRECTION TANK CLEANER

(Use Key # 890 on Inquiry Card on page 77)

A NEW TANK CLEANER providing three-dimensional rotation of a high pressure hydraulic jet has been announced by the Sellers Injector Corporation. Designated as the "Rotor Jet," this compact, lightweight device delivers two powerful streams of hot or cold water, with or without detergents, over the entire inside surface of any shaped tank.

Portability of the Rotor Jet enables one man to handle the entire tank cleaning operation without assistance. The unit is simply lowered through the tank access by means of its supply hose. Since it is completely controlled from outside, workmen need not enter the tank.

The mechanical movement of the Rotor Jet assures complete coverage. Cleaning speeds are fully adjustable—high speeds for light cleaning or rinse; slow speeds for heavy cleaning give longer hydraulic scrubbing and greater heat transfer to the tank surface. The two jets, powered by a venturi-injector, provide high velocity streams so that a scrubbing rather than cascading action results. The jet head is rotated pneumatically, so that all hydraulic power is utilized for cleaning. It is available in three models for discharge capacities from 600 to 6000 gph.

FIBER GLASS SKYLIGHTS

(Use Key # 891 on Inquiry Card on page 77)

THE CONSTRUCTION advantages of translucent fiberglas panels, such as excellent light diffusion, virtual indestructibility, and exceptional insulating qualities,

have been incorporated into a new line of packaged skylights and ventilators, now being fabricated and marketed by the Marco Co. The featherweight skylights and ventilators consist of a corrugated translucent structural panel made by the Alsynite Company of America, permanently set in an extruded aluminum frame. The complete unit is factory engineered for permanent, maintenance-free service, and it can be attached to the curb member in minutes with only a screwdriver.

The fiberglas panel is slightly domed in the middle to permit inside condensation to flow to the frame's built-in gutter, where it is channeled to the outside via weep holes spaced at 4 in. intervals. The extruded frame is a rugged, one-piece unit that is mitered and welded at corners for maximum strength, ease of handling and clean appearance.

PAINT HEATER

(Use Key # 892 on Inquiry Card on page 77)

THE CONTROL OF organic material temperatures for the hot spray process is achieved in a new line of paint heaters developed and manufactured by the DeVilbiss Company. This paint heating system, which utilizes hot water, is designed for maximum efficiency in either large or small painting operations. The only moving part is a pump for circulating hot water.

Material to be sprayed is heated in a heat transfer unit located near the spray station. Exchange of heat from the hot water to the material is positive and speedy. Paint cannot become overheated. To assure heated material at the point of usage, a jacketed hose runs from the heat exchanger to within a few inches of the conventional spray gun. The water is heated in a separate unit which can be located wherever most convenient.

R COOLER FOR RDOUS AREAS

on Inquiry Card on page 77)

R Corporation of America that its compartment-type lodel TC-8X, has been the l to receive Underwriters' proval for use in hazard- These Puro coolers have plosion-proof by enclosing mponents, which, however, ely accessible for servicing. bines the bubbler-top (with bgging pre-cooler) and re- storage compartment for food. It also contains two The stainless steel com- proximately two cubic feet so has a drain for conden- quipped with cabinet-type ys and operates on either nt.

HROOM CLEANER

on Inquiry Card on page 77)

ERS, Inc. have introduced "OUT," a washroom fixture nfectant which, they claim, advantages over conven- ordinarily used in wash- ce. The product performs four jobs in one—cleaning, disinfecting, sanitizing and deodorizing. Rigorous tests have shown it to be safe for use in toilet bowls, urinals, sinks, tubs, showers, etc. It can be used on ceramic, porcelain and porcelain enamel surfaces, vitreous and non-vitreous, without injury to the finish. While it works fast and thoroughly, no gloves or special handling are required.

The product is a blue liquid cleaner, packed in half-gallon and gallon jugs. The jug has a wide mouth, permitting the mop to be dipped directly into the cleaner. The disinfectant qualities keep the mop sanitary. The jug has a convenient carrying handle, and is packed in regular cardboard cartons. Mops and check-mirrors are included in each carton.

PRESSURIZED WATER EXTINGUISHER

(Use Key # 895 on Inquiry Card on page 77)

A NEW PRESSURIZED water type fire extinguisher, "Elk-Air," has just been announced by Elkhart Brass Mfg. Co., Inc. This is the first extinguisher of its type using only Air-Pressure rather than a cartridge charge to be listed by U. L., according to the manufacturer. An outstanding feature is the minimum cost of maintenance. It can be recharged simply by replacing the water and pressurizing by air the same as an automobile tire.

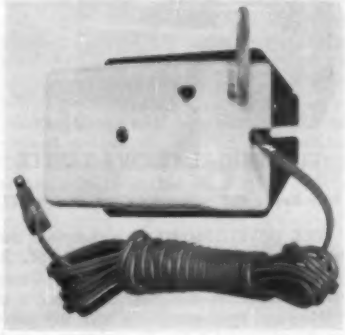
Valve controlled, Elk-Air is easy to operate. Merely pull the pin, direct hose nozzle and squeeze handle to release stream. The valve control permits stream to be turned on or off, conserving water and eliminating excess water damage. An easy-to-read pressure gauge indicates if extinguisher is ready for action. Tests show that the unit gives full capacity use of the 2½ gallons of water and will maintain a steady stream length of from 35 to 40 feet, until water supply is exhausted with no dribbling or drop-off of stream. The extinguisher has a removable fill tube with anti-overfill feature, and carries the Underwriters' Laboratories Inc. Approval for Class A-1 incipient fires, which covers such items as wood, cloth, paper and rubbish. It has a seamless brass drawn shell with all brass forged parts, and can also be supplied with an anti-freeze charge.

NEW LINE MARKING PAINT

(Use Key # 896 on Inquiry Card on page 77)

A NEW PAINT suitable for municipal, airport, highway and industrial line-marking, factory and home interiors and building exteriors has now been developed and tested by the research laboratories of the Rock Paint and Chemical Co. The new paint, called "Glazroc," is completely odorless, fire resistant, fast drying and may be thinned with water. It will adhere to concrete, metal, wood, plastic, plaster, asphalt, asbestos, concrete block and stucco. It will cover dirt and grease and when used as a line or sign marking paint, will not react chemically on tar or asphalt, and is non-tracking after 30 minutes. Second coat, when needed, may be applied after 60 minutes and it can be beaded where necessary. Glazroc will withstand temperatures up to 500° Fahrenheit and its scrubbability is excellent.

Because Glazroc does not contain or require flammable thinners there are no harmful, explosive fumes; it is non-irritating to those allergic to paint or paint fumes and may be applied indoors without extra ventilating precautions. May be removed from brushes, machines, skin, clothing with soapy water. It is not discolored by industrial fumes and will not change color from vehicle. It can be applied thin or heavy with either brush or spray machine and may be repainted with any paint without difficulty. Available in almost any color in quantities from quarts to tank cars.



DOOR ALARM

(Use Key # 897 on Inquiry Card on page 77)

MANY SAFETY applications can be found for "Dor-A-Larm" a newly developed warning device which was originally designed as protection against illegal entry. Operating on standard 110 volt, 60 cycle electric current, the unit is easily attached to any window sill or door jamb by two mounting screws. If the protected window or door is opened as little as one inch, a powerful bell-alarm is set off.

All parts of the unit which comes with an 11-foot electric cord are UL approved and the device is fully guaranteed by its manufacturer. For safety purposes, it could be used as an alarm to prevent entry by unauthorized personnel into particularly hazardous areas.

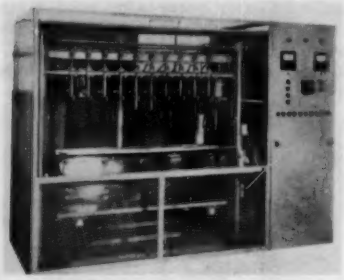
PORTABLE VENTILATOR

(Use Key # 898 on Inquiry Card on page 77)

A PORTABLE ventilator has been announced by the manufacturer, Mine Safety Appliances Co. Used as a blower or as an exhauster, the two-way ventilating system is a compact, easily portable unit with many applications in a variety of industries. Suggested applications include removing toxic or fume-laden air from tunnels, manholes, shipholds, and other confined areas; removing smoke from factory or foundry operations; dust removal in operations such as sandblasting, cement unloading, plaster chipping, or dry chemicals handling; or to remove fumes resulting from welding or paint spraying. It may be used either with or without the accompanying collapsible air duct.

With its duct, the MSA Portable Ventilator is suitable for ventilating confined areas which cannot be reached by conventional types of stationary ventilating equipment.

The ventilator is driven by a powerful 3450 rpm, explosion-proof electric motor, capable of moving approximately 3000 cubic feet of air per minute. It is supplied complete with 15 feet of three-wire electrical cable, and a 15-foot length of 14-inch diameter duct, and two carrying belts.



ELECTRICAL GLOVE TESTER

(Use Key # 899 on Inquiry Card on page 77)

THE DEVELOPMENT of a complete line of glove testers is announced by F. R. Hannon & Sons. The new Hanco Glove Tester measures the dielectric strength of rubber and synthetic gloves normally found in the electrical field. Available in 4, 6, 8, and 10 glove models, it is said to meet all specifications of the American Society for Testing Materials. Having a capacity of 50,000 volts, it can be manually or automatically controlled. During the 4-minute test cycle, the leakage on any glove can be read on the milliammeter within 1% accuracy. Tester operation is said to be simple and safe.

The tank compartment gate is electrically interlocked with the power panel and remains locked during complete test cycle. The enclosed test tank is mounted on insulators and grounded through a special grounding device when removing or placing gloves in the tank. Insulated glove holders are mounted on a counterbalanced ball bearing carrier which can be latched in either the filling or testing position. The glove electrodes are adjustable to length of glove being tested.

DRIVEWAY SEALER

(Use Key # 900 on Inquiry Card on page 77)

A DRIVEWAY topping and sealer containing no water to permit application under any weather condition has been introduced by the Sylvania Chemical Co. The "Sylvus Driveway Topping and Sealer" will fill all cracks and voids and is suitable for any hard top surface whether black top or cement. This heavy body paint chemically combines the softness of asphalt and hardness of tar so that it will not soften under hot weather conditions nor crack during winter weather.

The material is used as it comes from the container, requiring no special tools or equipment. One application with a three-knot brush, barn broom or squeegie will last for a minimum of three years. It dries to a hard black finish in two to three hours, resists gasoline and grease, and waterproofs and seals the driveway. One gallon covers 50 to 60 square feet, and is marketed in five gallon containers and 55 gallon drums.

FIRE RESISTANT CURTAINS

(Use Key # 901 on Inquiry Card on page 77)

THE DANGERS of fire destroying industrial curtains and partitions and possibly spreading to other parts of a building are eliminated by the use of Duratex Utility Curtains. Duratex, manufactured by Duracote Corp., consists of a fabric base woven of Fiberglas or Nylon yarn coated with synthetic plastic resins—that will not harden, crack or peel—for complete and permanent fire resistance.

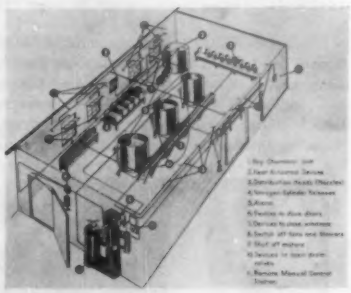
These utility fabrics are widely used for welding curtains and as electrical insulating blankets for the protection of personnel and equipment during maintenance and repairs. The material is also light weight, has high breaking and tearing strength, smooth surfaces which make it snag and dirt resistant, withstands water, oil, grease, alkalis and most acids and is not affected by temperature extremes. These qualities make the fabrics suitable for such uses as paint department curtains, heat barriers, pickling operations and for temporary and permanent room-dividing partitions. Light dusting will keep the smooth surface clean and, in the event of extreme soiling, soap and water will remove any spots. Duratex standard fabrics include three weights each in Fiberglas and Nylon. The standard color is rich Forest Green. Other colors are available in minimum order quantities.

PLASTIC ROPE

(Use Key # 902 on Inquiry Card on page 77)

A NEW PLASTIC cable with innumerable industrial applications is now being marketed by Reynolds Industries. Made of du Pont's "Mylar," the cable offers a unique combination of advantages to industrial users. It has high mechanical strength, high impact strength, excellent flex life, is completely impervious to water, highly resistant to solvents and chemicals, and has thermal stability over a temperature range from minus 70° F. to plus 300° F.

Development of special machinery for twisting "Mylar" film into strands and laying the strands into cable has made this new rope possible. The cable may be spliced the same as regular fibre rope and may be cut with the "hot knife" method. The cut ends will heat seal to prevent unraveling. It shows remarkable resistance to abrasion and will safely handle large work loads. Applications have already been made in the marine, construction, petroleum and chemical industries. Safety engineers in many other industries have expressed interest, and exhaustive tests are being carried out by fishing and yachting interests. The new cable is available in all standard rope sizes from ⅛" to 1" and special sizes may be obtained.



DRY CHEMICAL SYSTEM

(Use Key # 903 on Inquiry Card on page 77)

UNDERWRITERS LABORATORIES, Inc. has granted approval to the dry chemical piped system of fire extinguishment developed by the Ansul Chemical Co. The listing follows an exhaustive series of more than 1,600 tests, conducted over a period of five years.

With this system, automatic fire protection is provided against Class B and Class

C fire hazards by means of dry chemical, which is conveyed through pipes and expelled in the area surrounding the hazard. The approval means that now dry chemical piped systems can be installed to protect such hazards as paint dip tanks and spray booths, ovens, driers, oil quench tanks, flammable liquid pumping stations, transformer vaults, diesel and gasoline engines, generators, oil storage tanks, flammable liquid storage rooms, asphalt saturators and marine hazards. These piped systems have already been installed in the metal fabricating, aviation, petroleum, chemical, paper and automotive industries and in the electrical utility field. They provide for either automatic or manual operation and can be activated at the system or by remote control. Automatic systems may also be operated manually and for either local application or total flooding.

The automatic systems are operated either by pneumatic rate-of-rise type of heat detection devices or by electrically operated releases. Doors, windows, ventilation ducts, operating valves, etc. can be closed automatically by the system's nitrogen pressure. An electric switch energized when the system operates turns off fans and machinery and sounds alarms around the plant or in a central fire alarm headquarters. By using automatic selector valves, one piped system can protect two or more separate hazards. Dry chemical flows only into the piping that leads to the fire area involved.

SEALED ELECTRICAL CONNECTORS

(Use Key # 904 on Inquiry Card on page 77)

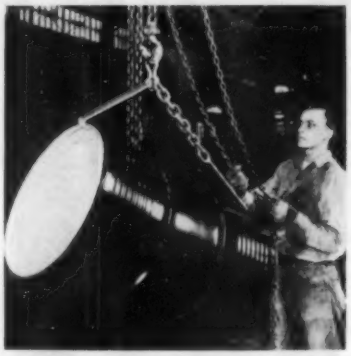
A NEW SERIES of electrical connectors are being introduced by Rodale Mfg. Co. under the trade-name of Flip Seal. New features of the UL-approved connectors include a flexible rubber lip over the female component of the connector which flips over the male component to insure a positive sealing and locking type action. At both ends of the connector the cable entrances are also provided with a sealing action wherein the cable entrances fit snugly around the wire. These actions seal out moisture, dirt, dust, metal particles, and other conditions which tend to interrupt the flow of current.

The connector components are molded of rugged phenolic, and completely encased in a rubber or Neoprene housing. According to the manufacturer, tests indicate that Flip Seal connectors are especially suitable where accidental damage, excessive moisture, accumulation of oils, gasoline and grease, and climatic conditions, exist and can cause harm to the required connection.

COLD METAL CLEANER

(Use Key # 905 on Inquiry Card on page 77)

A NON-FLAMMABLE solvent of low toxicity has been developed by Merchants Chemical Co., Inc. for cold type metal cleaning operations. Called "Chlorothene," the cleaner is said to have excellent solvency for oils and greases and to be rapid drying. It can be used on all metals, including aluminum, without corrosive effects and is also suitable for cleaning plastic molds. The product is soluble in acetone, benzene, carbon tetrachloride, methanol and ether.



NEW BARREL HOOK

(Use Key # 906 on Inquiry Card on page 77)

A NEW ALL-POSITION barrel hook has been added to the Safety Tool line of Ampco Metal, Inc. This utility tool has a sliding ring which can be locked between links. This feature allows the drum to be either lifted or tilted for emptying. Overall length of the hook is reduced from 47" to 42" providing for greater head-room when loading or unloading drums from storage racks.

A satisfactory safety factor has been allowed above the 1500 pound safety test given each hook by the Company.

The new barrel hooks are made completely of Ampco Metal, a strong, durable, spark-resisting alloy. Their principal use is for handling drums of flammable or explosive materials, such as: paints, lacquers, thinners, high octane fuel, acetone, naphtha and many others.

HEAVY-DUTY VACUUM CLEANER

(Use Key # 907 on Inquiry Card on page 77)

A NEW HEAVY-DUTY electric vacuum cleaner for industrial and automotive use has been announced by The Black & Decker Mfg. Co. Called the No. 95 Vacuum Cleaner, this unit is claimed to have up to 20% more cleaning power, a dry capacity of 1½ bushels of dirt, and a wet recovery capacity of 13 gallons. It will move 75 cubic feet of air per minute through a one inch orifice, and has a maximum sealed suction rating of 70" of water. The motor, rated at 1¼ horsepower, is designed especially for vacuum cleaning. It is sealed

against dirt and water, and has its own cooling fan.

An outstanding feature is the super flexible, accordion type hose offered as standard equipment. This hose measures 5 feet, but may be expanded to 15 feet. The enlarged hose diameter of 1½ inches makes possible the pick-up of larger objects without the danger of clogging. Additional features include a removable pushcart type handle with a storage section for attachments; swivel-type intake pipe that may be rotated 270 degrees; dust filter that can be easily removed for cleaning, or cleaned while attached to the machine, simply by shaking, permitting the dirt to fall to the bottom of the tank.

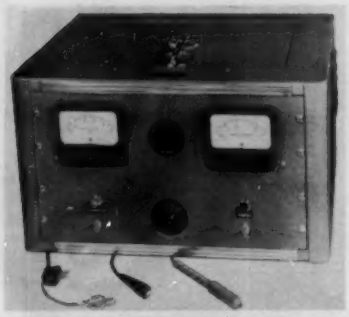
A locking device on one of the casters holds the machine stationary when desired. Accessories included as standard equipment are a 6" nozzle for upholstery cleaning and general purpose usage, a 6" brush, a crevice tool, and a hose swivel which can be rotated 360 degrees, or locked in any one of four positions. Offered as optional equipment are a 15" floor brush, a squeegee, and a 15' length of flexible hose, plus extension tubes of various shapes for specific applications. The universal motor is obtainable in 115 or 220 volts, with 125 or 240 volt motors available on special order.

MASTIC FLOOR DESIGNED FOR TRAFFIC LOADS

(Use Key # 908 on Inquiry Card on page 77)

A MASTIC FLOORING that meets the demand of modern industrial traffic requirements is a recent development of Flash-Stone Company, Inc. Trade-named "Liggite," this new industrial floor incorporates a new discovery "Liggite," a unique binder which increases stability without loss of tensile strength. Vehicular loads start and roll easily over Liggite. It is highly resistant to all traffic loads and does away with the drag on vehicular loads, common to most mastic floors.

There are no humps at the edges of the installation, because the material "feathers" well. Vibration noises are reduced. It is resistant to attack by grease and oil although it will deteriorate under long exposure to large quantities of petroleum products. Liggite requires a 24-hour waiting period after installation before it is ready for use.



DIELECTRIC TESTER

(Use Key # 909 on Inquiry Card on page 77)

A VERSATILE INSTRUMENT for dielectric testing up to 5000 V.D.C., and insulation resistance measurement up to 50,000 megohms is the Model 424 D.C. Hypot. Originally introduced in 1952 by Associated Research, Inc., it has now been redesigned for increased serviceability and ease of panel mounting. Applications are dielectric testing of electrical and electronic components, and insulating materials, and maintenance testing of rotating machinery and transformers.

Featured is a continuously variable output voltage of 0–5000 V.D.C. read on a large 4½" voltmeter, and output current ranges of 0–5/10/50/100 microamperes indicated on a 4½" microammeter, electronically protected against overload. The unit is housed in a grey wrinkle-finish steel case 22" x 14¾" x 12 5/16" with 5' output leads terminating in a Mueller clip and retractable tip prod, and is arranged for standard rack and panel mounting.

CLEANER & TOWEL DISPENSER

(Use Key # 910 on Inquiry Card on page 77)

A NEW APPLIANCE which combines a patented, waterless liquid hand-cleaner dispenser with attached paper towel dispensing cabinet is said to simplify installation of hand-cleaning facilities at any work area in plants and service shops.

Two models are available, both for wall mounting: a single metering dispenser on a single-fold towel cabinet, and one with choice of single or twin-metering dispensers on a double-fold towel cabinet.

Each quart-size dispenser provides approximately 300 hand cleanings, with each filling accomplished by up-ending the polyethylene container on its swivel bracket and refilling with liquid. Only a waste receptacle is needed for a complete hand-cleaning station with the new hand-care unit of Hammons Products, Inc.

ALL PLASTIC GOGGLE

(Use Key # 911 on Inquiry Card on page 77)

MADE OF PLASTIC, this lightweight goggle affords wide angle vision and may be worn over prescription glasses. It is of one-piece construction with moulded rubber binding to fit natural contours of the face. The elastic head band insures a snug fit and all-day wearing comfort.

Available from General Scientific Equipment Co., it protects against flying particles, sparks, splashes, chips, dust, glare—in countless jobs in factories, foundries, shops, laboratories, mines and quarries. Available with clear or green lenses.

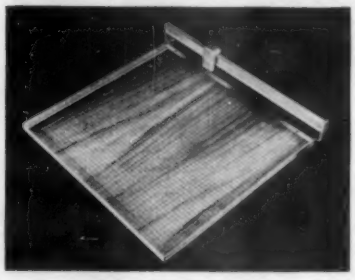
What's YOUR Problem?

- **Has an accident or fire interrupted production?**
- **Want to know how to prevent it?**
- **Do you need background information on equipment for industrial safety, hygiene, or maintenance?**

As a service to its readers, "Safety Maintenance" will arrange to supply manufacturers literature on the following subjects. Just insert the key number on the Readers Inquiry Card on the opposite page and be sure to fill in your name and address. If you need information on a specific type of product, simply write it on the Inquiry Card.

Key Number	Subject
101	Safety Goggles
102	Face Shields
103	Lens Cleaning & Anti Fogging Equipment
104	Sweatbands
105	Hard Hats
106	Respirators & Masks
107	Protective Clothing
108	Women's Protective Clothing
109	Safety Belts
110	Safety Gloves
111	Safety Toe Shoes
112	Safety Boots
113	Wooden Sole Shoes
114	Anti-Slip Soles
115	Oil-Proof Soles
116	Welding Helmets
117	Welding Curtains
118	Protective Skin Creams
119	Skin Cleansers & Soaps
121	Sanitary Drinking Cups
122	Athlete's Foot Control
123	Salt Tablets
124	Noise Control
125	Antiseptic Medication
126	Burn Medication
127	First Aid Kits & Supplies
128	Stretchers & Litters
129	Resuscitators

Key Number	Subject
130	Portable Ventilators
131	Dust & Fume Collectors
132	Carbon Monoxide Control
133	Fire Extinguishers
134	Safety Cans
134A	Extinguishing Ash Trays
136	Alarms & Warning Lights
137	Safer Solvents
138	Flammable Liquid Pumps
139	Explosion-Proof Lights
140	Electrical Insulation Testers
141	Anti-Slip Flooring & Steps
142	Anti-Slip Waxes & Finishes
143	Floor Cleaning Products
144	Floor Machine Equipment
145	Oil & Grease Absorbents
146	Paints
147	Ladders & Safety Devices
148	Scaffolds
149	Work Platforms
150	Fluorescent Lamp Guards
151	Machine Guards
152	Power Press Feeders
153	Safety Signs
154	Aisle Marking Equipment
155	Safety Awards & Emblems
156	Employee Safety Guide
157	Hand Tools



SAFETY TRIM BOARD

(Use Key # 912 on Inquiry Card on page 77)

THIS NEW TYPE of paper trimming board eliminates the hazards associated with the chopper-blade trim board. Made by Zeus Rolcut Co., this new board utilizes an enclosed rotating wheel cutting blade that travels on a rigid I-beam track, for safety, accuracy and long service life. The wheel is self-sharpening and is covered by a metal housing.

The trim board can be used for paper, film, plastic and other sheet materials. It is suitable for general office use, printing and engraving plants, photography studios, libraries and schools. Cutting boards of larger sizes make industrial paper cutting more efficient and less hazardous. Available in six sizes.

FREE BULLETINS & CATALOGS

As a convenience to executives, these new publications of manufacturers are offered by the Reader Service Department of SAFETY MAINTENANCE & PRODUCTION. To obtain copies write in the key numbers on the free-postage card below.

PERSONAL PROTECTION

Respiratory Protection 271
American Optical Co. This fully illustrated and unusually informative 30-page brochure describes many types of approved filter, cartridge and air line respirators and also accessory devices, such as hoods, goggles and shields. An excellent chart lists various chemical and dust hazards and shows types of respirators that are suitable. Includes section on how to clean equipment.

Lens Anti-Fog & Cleaner 272
The Buckley Corp. Small folder describes a combination lens cleaning and anti-fog liquid, showing uses in industry, offices, sports and home. Folder illustrates three types of packaging for the liquid: pocket capsule, plastic bottle for bench or desk, wall dispenser cabinet.

Water Repellent for Shoes 273
Dow Corning Corp. Small bulletin gives essential data on a silicone treatment to make shoes and other leather products water repellent. Explains how the silicone penetrates the leather but lets air continue to enter, and how the liquid can be applied.

Crown Strap for Hard Hats 274
Willson Products, Inc. This illustrated mailing piece shows why the inner suspension design of hard hats is important in providing positive head protection. Describes a cushioned pneumatic head band and a crown strap that provides stable support.

Work Clothes 275
Resistall Work Clothes, Inc. An illustrated 8-page catalog features a varied selection of industrial apparel made of DuPont Orlon and Union Carbide Dynel, which make the clothing more resistant to deterioration by chemicals than natural-fibre fabrics. Includes laboratory reports on effects of specific chemicals.

Protective Clothing 276
Wagco Products, Inc. Illustrated bulletin shows various types of rubber, plastic or fabric hoods (with or without air line connection) safety sleeves, aprons, hand pads, gloves, jackets, capes, spats, etc.

Sole Selector 277
Gro-Cord Rubber Co. This convenient sole selector enables safety engineers, manufacturers and retailers to determine instantly which type of work shoe sole has the best safety, comfort and wear qualities for any of 50 basic industrial jobs.

Safety Goggles & Equipment ... 278
Dockson Corp. A well illustrated 42-page catalog describes and illustrates a varied line of eye and head protection products. Includes valuable reference materials on the selection of lenses and covers many types of protective goggles, shields, welding helmets, respirators and hard hats.

MAIL POSTAGE PAID CARD FOR MORE DATA

FLOOR MAINTENANCE

Better Floor Care 279
Multi-Clean Products, Inc. Interesting 8-page broadside describes and illustrates a full line of floor machines and maintenance products. Also explains four points for better floor care and includes a liquids chart describing 24 liquids for all types of floors.

Stair Treads & Thresholds 280
Wooster Products, Inc. A new 12-page illustrated catalog shows a complete line of anti-slip metal stair treads and thresholds, including abrasive-surfaced iron, aluminum or bronze; abrasive-ribbed aluminum or brass; and extruded aluminum or brass. Other items shown are metal window sills, trench & hatch covers, and curb bars.

Non-Slip Floor Finish 281
Shralyte Co. Folder gives pertinent data on a U.L. listed emulsified plastic floor finish which contains no wax, is non-flammable & nonslip and requires no buffing. Also described is a wax and oil remover for floor maintenance.

GUARDING EQUIPMENT

Table Saw Guard 282
Brett-Guard Co. An all-purpose guard and guide for woodworking table saws is described in this 1-page bulletin. Of revolutionary design, the new guard is shown in line drawings as used for a wide variety of sawing operations, including mitering, rabbeting, tenoning, dadoing, etc.

Automatic Centering Reels 283
F. J. Littell Machine Co. Well-illustrated catalog section of 12 pages outlines the features of various types of automatic centering spindle reels for feeding metal coil to presses and other machines. Specifications for the models included.

Drop Gate Press Guard 284
Searjeant Metal Products, Inc. Transparent plastic drop gate guards, suitable for large and small presses, are shown in this bulletin. Utilizes a solenoid or air cylinder to prevent operation of the press until guard is in fully "down" position.

LADDERS & SCAFFOLDS

Step Platforms 285
Ballymore Co. Attractively illustrated folder shows many types of safety step platforms for low and medium heights. The rolling units with automatic position-locking devices have from 1 to 8 steps made of nonslip expanded metal grating. Higher models have hand rails and platform rails.

(Continued on next page)

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May, 1955 **Please send me the following free data (Remember to fill in your name and address.)**

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Free Bulletins (Cont'd)

Ladder Safety Device 286
Safety Tower Ladder Co. Illustrated folder describes the construction, uses and safety features of a fall-preventing device for use on fixed ladders. Unit permits unobstructed activity of user, but limits an accidental fall to 7 inches.

SKIN PROTECTION

Silicone Skin Cream 287
Siladerm Laboratories. A skin cream and an ointment containing silicones are described in this bulletin. The hand cream is to prevent contact dermatoses and allergies, while the ointment is for therapeutic use and as a dermatitis preventive under very severe conditions.

Hexachlorophene Bibliography .. 288
Sindar Corp. A completely revised bibliography of literature on hexachlorophene contains references and abstracts of 136 scientific and trade articles on this antiseptic ingredient for soaps and other products. Bulletin is well indexed into useful categories.

FIRE PROTECTION

Fire Pumps 289
Gorman-Rupp Co. Three models of portable fire-fighting pumps, for direct use or as boosters for truck pumps, are shown in this illustrated bulletin. Includes features and performance charts for the three types.

Tramp Iron Magnets 290
Eriez Mfg. Co. A 24-page booklet features ideas on how permanent magnetic separators can be used to collect tramp iron for fire prevention, and protection of products and machinery. Included are case histories of actual installations.

Fire Blanket 291
Cotton Goods Mfg. Co. An asbestos fire blanket and its self-storing container are described in this bulletin, which includes uses for the blanket and data on the wall-mounted canister.

Fire Resistant Hydraulic Fluid .. 292
Monsanto Chemical Co. A 20-page bulletin outlines the outstanding features of Pydraul F-9, a fire-resistant fluid for use in hydraulic equipment operating near possible sources of ignition. Particular attention is given to the fluid's safety, and it is also said to equal petroleum fluid in lubricity, stability and service life.

Alarm Systems 293
American District Telegraph Co. A 36-page illustrated booklet describes the many central-station services provided for customers in 650 cities in this country, including protection against fire, burglary and other hazards.

MISCELLANEOUS

Self-Sticking Signs 294
W. H. Brady Co. Illustrated in full color, this 16-page bulletin describes and shows numerous examples of safety signs that can be posted at the point of hazard. The backs of the fabric signs are already coated with an adherent material for easy application. Designs, colors and wordings follow ASA code and include radiation hazard signs.

Loading Dock Shield 295
Frommelt Industries. Illustrated folder shows uses for loading dock shields, that are collapsible and consist of metal frames covered with fire-, water- and mildew-resistant canvas to protect the movement of goods when loading or unloading trucks.

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THE safe worker really looks and acts it. He comes to the job with a feeling of security —and the standard of his work shows it.

The promotion of safety by Industry is a great accomplishment. It pays not only in safeguarding life and limb, but in higher morale, improved skills, better production.

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Workers respond to safe conditions when guided by proper warnings and instructions. Keep telling them—with Stonehouse Signs that inform them of hazards and dangers. This is true accident prevention.

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(For details, use Key # E-45 on card on page 77)

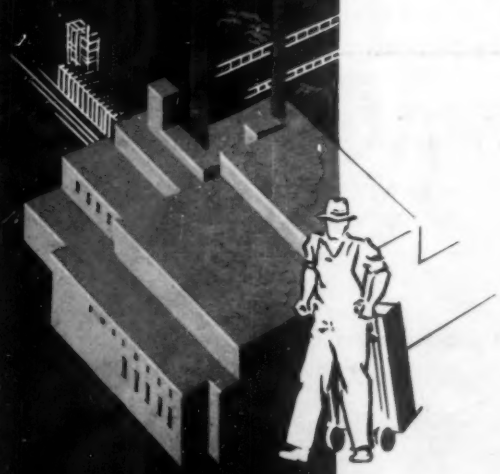
MERCUROCHROME®

for first Aid

Neglect may cause infection, which can be prevented by prompt use of Mercurochrome.

No antiseptic has been proved to be more effective than Mercurochrome.

Thirty-four years of extensive clinical and lay use has proved the value of this popular antiseptic.



Thantis LOZENGES

First aid for throat irritations...

Thantis Lozenges relieve pain promptly—reduce infection—act prophylactically.

Sore throats due to coughs and colds, if neglected, may result in lost man hours of work.

HYNSON, WESTCOTT & DUNNING, INC., BALTIMORE 1, MARYLAND

(For details, use Key # E-46 on card on page 77)